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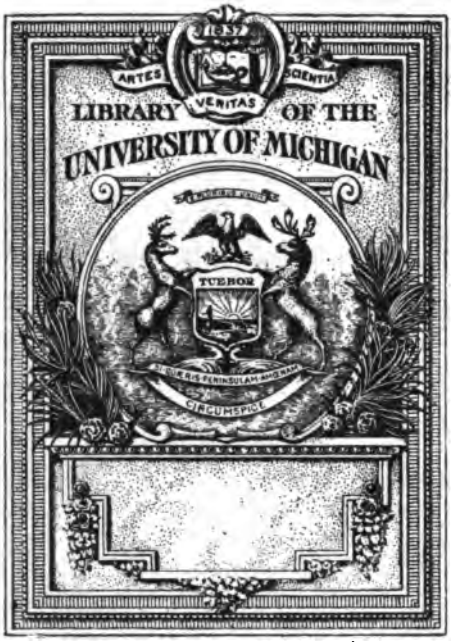

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EDUCATION OF BUSINESS MEN

A VIEW OF THE ORGANIZATION AND COURSES OF STUDY
IN THE

COMMERCIAL HIGH SCHOOLS OF EUROPE

A REPORT TO THE AMERICAN BANKERS'
ASSOCIATION

By EDMUND J. JAMES, Ph.D.,
PROFESSOR IN THE UNIVERSITY OF CHICAGO

CHICAGO
The University of Chicago Press
1898

By the same Author.

1. **The University and the Higher Education of Business Men.**— An address on the Wharton School of Finance and Economy before the National Bankers' Association at Saratoga, September 3, 1890.

2. **Economic and Social Aspects of Public Education.**—An address before the American Institute of Instruction, Bethlehem, July, 1891.

3. **College and University Education for Business Men.**— Address before the College Section of the National Teachers' Association, Toronto, July, 1891.

4. **A Plea for the Establishment of Commercial High Schools.** —An address before the American Bankers' Association at San Francisco, September 7, 1892.

5. **School Training in the Theory and Practice of Business.**— An address before the Philadelphia Board of Trade, December, 1893.

6. **Philadelphia's Need of a Commercial High School.**—An address before the Educational Club of Philadelphia, 1894. Printed with a proposed curriculum.

7. **Commercial Education in our High Schools and Colleges.** —An address before the Missouri Bankers' Association, St. Louis, June 10, 1896.

8. **The Place of the Political and Social Sciences in Modern Education.**—Annual address before the American Academy of Political and Social Sciences, April 21, 1897. Published in the Annals of the Academy, November, 1897.

9. **Outline of a Proposed School of Political and Social Science.**— Philadelphia Social Science Association, Philadelphia, 1885.

10. **A School of Political and Social Science.**—Ethical Record, 1890.

11. **The State University and the Education of Business Men.** —An address before the University of Missouri, January, 1898.

Committee on Schools of Finance and Economy of Executive Council of American Bankers' Association:

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EXECUTIVE COUNCIL,
AMERICAN BANKERS' ASSOCIATION.
COMMITTEE ON SCHOOLS OF FINANCE AND ECONOMY.

PHILADELPHIA, September 1, 1893.

AT the convention of the association held in San Francisco in September last, Professor James embodied in an address a partial report of the result of his investigations of European institutions for the education of business men, made in behalf of this association, which address was published in the Proceedings of 1892, and separately as "Education of Business Men—III." in which it was announced that a more extensive report was in preparation by Professor James, to be published under the title of "Education of Business Men in Europe," and which is here presented as the fourth in the series of pamphlets issued by the association upon the Education of Business Men.

In his report Professor James presents an account of what is being done in Europe in the way of providing for the special education of the business classes. It shows that there is a European experience which is well worth the study of our American educationists. The history of this experience also demonstrates conclusively that the initiative in such education must come from the business classes themselves. No country in the world needs such education more than the United States.

It should certainly be a privilege, as it is a duty, for the members of our association to consider the subject and ascertain by actual inquiry what is being done in their own localities in this department of education, and having discovered the facts, to set about securing the establishment of opportunities for more thorough business education where such opportunities do not exist and the improvement of such opportunities where they have already been developed. It is to this end that the efforts of the association have been directed, and it is evident, from the interest awakened upon the subject, that these efforts have not been altogether in vain. It is especially commended to the consideration of the State Bankers' Associations, some of whom, it is encouraging to notice, have already begun to move in the matter.

WILLIAM H. RHAWN,
Chairman.

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CONTENTS.

PART I.

PAGE

Committee on Schools of Finance and Economy ii
Preface by Wm. H. Rhawn, Chairman of the Committee iii
Pictures of Buildings . . . . . ix-xiv
Origin of the Report—Efforts of the American Bankers' Association to Arouse an Interest in the Higher Education of Business Men—Examination of the Wharton School of Finance and Economy—Addresses before the Asssociation by Professor Edmund J. James xv
Invitation to Professor James to Report Upon Commercial Education in Europe—Object of this Report—Conclusion as to Desirability of Commercial High Schools and Schools of Finance and Economy in the United States—Method of Organizing Commercial High Schools xvi
Advantages of Such Schools—Need of Such Schools—Breakdown of Old Apprenticeship System—Need of Professional Education—Growing Response to Educational Effort Along This Line—Relation of Commercial to Liberal Education xvii
True Aim of Educationalists in Regard to Commercial Education—Advantage of Such a School to the Youth of Fortune and to the Poor Youth . xviii
What May be Expected of Such Schools—Character of European Schools Discussed in this Report—Higher Commercial Education in Europe—Commercial Courses in Real Schools xix
Relation of Military Laws in France and Germany and Austria to the Curricula of Commercial Schools xix
Free School of Political Science at Paris xx
Commercial Schools in other European countries xx
Commercial Education in England xxi
What the Bankers' Association can do to Promote Sound Financial Education, Special Reason for Favoring Commercial Education in the United States at Present—Relation of Commercial High Schools to General System of Public Education xxi

PART II.

A.

HIGHER COMMERCIAL INSTRUCTION IN AUSTRIA.

Introduction. Realhandlungsakademie in Vienna. Commercial Courses in Technical Schools. Date of Establishment of Commercial Academies, 1-2

I

The Commercial Academy in Vienna.

Origin. History of Foundation. Opening. Established by a Private Corporation Organized for the Purpose. Method of Government . 3-4
Curriculum in 1871-72. Preparatory Classes. Academy. Reorganization in 1872. Curriculum of Academy in 1876. Commercial High School 5-7
Curriculum of Commercial High School. Reorganization in 1877 . . . 8-9
Academy with a Three-Year Course. Requirements for Admission. Tuition. General View of Subjects of Instruction 10-11
One-Year Course for Graduates of Gymnasia and Real Schools. Curriculum of Same 12

PAGE

Synopsis of Curriculum of the One and Three-Year Courses in the Academy 13–25
Preparatory Class. Curriculum. Synopsis of Subjects 26
Collections. Coins. Laboratories. Physical Cabinet. Geographical Cabinet. Collection to Illustrate History of Art. Library. Traveling Scholarship Fund 27–29
Attendance at Academy. Subsequent Employment of Students Scholarships. Other Means of Assistance 30
Financial Support of the Academy. Current Expenses. Budget. Buildings. Detailed Statistics as to Students of Late Years. Aid Granted to Students 31–32
Faculty 33

2

Commercial Academy of Prague.
Foundation of the Institution. Need of Commercial Education. Inadequacy of Gymnasium and Real School to Supply this Want First Steps in Prague. Address to the Public 34–35
Opening of the Sunday School. Opening of the Academy. Proposed Curriculum. Inaugural Address of Director Arentz. Purpose, Function and Need of Commercial Schools. Influence of the Establishment of the Academy at Prague 36–41
History of the School from 1856 to 1872. Method of Instruction. Classes of Pupils. Administration of the Institution. Course in Railroading, etc., 1872 42–44
Present Purpose and Organization of the Academy. Curriculum of the Three-Year Course. Distribution of Hours and Subjects. Recent Statistics of Attendance 45–48
The One-Year Course. Curriculum. Admission. Statistics of Attendance. Budget of the Academy. Total Attendance from 1856 to 1885–86 49–50
Faculty 49–50
Salaries and Pensions. General Remarks on Commercial Education in Austria 51–52

B.

HIGHER COMMERCIAL INSTRUCTION IN FRANCE.

The Superior School of Commerce at Paris.
History of its Foundation and Development. Founders. Early Experiences. Blanqui's Administration. Gervais de Caen. Aimé Girard . 53–56
Sale of the School to the Paris Chamber of Commerce. Schwaeblé. M. G. Grelley. Statistics of Attendance 1872 to 1885 57–59
Scholarships. Requirements for Admission to Competition for Scholarships. Resident and Day Pupils 60–61
Outline of Instruction. First Class. Second Class. Third Class—Distribution of Hours and Subjects 61–64
Excursions. Examinations. Diplomas. Discipline 65–68
Administration. Receipts and Expenses. General Considerations. Alumni Association. Publications of the Same 69–74

2.

School of Higher Commercial Studies at Paris.
First Idea of the Establishment of Such a School—Preliminary Discussions—Reports of the Oriental Athenæum—Of the National Society of Education 75–77
Opening of the School—Purpose of the School—Situation of the School—Attendance—Scholarships—Organization of the School—Board and Tuition 78–81
Instruction—Program of Study—Preparatory School—Normal Course. Distribution of Hours and Subjects—Examinations (general and special)—Classification of Pupils 82–86

PAGE

Diplomas—Certificates—Budget—Methods of Financial Support—General Observations—Alumni Association 87–91
Official Program and Synopsis of Studies—Preparatory School 91–98
Program of the Regular Courses—System of Marks 99–124
Discussion and Comparison of the French Schools—Method of Organization—Relative Advantages—Councils—Scholarships—Subsidies—Traveling Scholarships: Conditions on which they are granted . . 124–128
Appeal to Business Men to Establish Scholarships—Length of the Curriculum—Age of Admission—Status of Bachelors—Growth in Attendance—Foreign Pupils—Relative Numbers of Resident and Day Pupils—Diplomas—Faculties—Comparison of the Budgets 129–135
Comparison of the Curricula of the Higher Schools—Common Studies. Spirit of the Instruction—General Systems—Relative Value of Theoretical and Practical Instruction.—Various Questions in Regard to this Subject 135–139
Examination of the Different Parts of the Curricula: Accounting; Commercial and Industrial Economy—Private Economy—Arithmetic, Algebra, and Geometry—Penmanship—Stenography—Industrial and Commercial Geography—Study of Railroads, Tariffs and Commercial Equipment—Commercial and Industrial Technology—Raw and Manufactured Products—the Art of Buying and Selling—Marine Equipment—French Language—Foreign Languages—Elocution—Commercial Law—Physical and Natural Sciences—Mechanics—Drawing—History of Commerce—Political Economy—Morals—Music and Gymnastics—Commercial and Industrial Visits—Concluding Remarks 140–155

C.

HIGHER COMMERCIAL INSTRUCTION IN GERMANY.

Public Commercial Institute at Leipsic.
General Remarks on Commercial Instruction in Germany.—Foundation and Origin of the Public Commercial Institute at Leipsic.—Account of Schiebe, the First Director.—Succeeding Directors.—Divisions of the Institute—Apprentice Department—Higher Department—Professional Course—Account of Each of these Divisions 156–167
Curriculum and Methods—Theoretical versus Practical Instruction in Germany—Changes in the Curriculum—Budget of the Commercial Institute 164–163

D.

HIGHER COMMERCIAL INSTRUCTION IN BELGIUM.

Superior Institute of Commerce at Antwerp.
Foundation of the Institute and its Subsequent Development—General View of the Attendance at the Institute—Nationality of the Pupils Attending—Subsidies—Scholarships—Government of the Institute—General and Special Matriculation—Entrance Examination—Vacations 168–170
Programs: of the Preparatory School—of the First Year—of the Second Year—Weekly Distribution of the Time—Discussion of the Curriculum. 171–175
Examinations—Relative Importance of Each Subject—Diplomas—Traveling Scholarships.—Discipline.—Government of the Institute—Council of Improvement—Of Inspection—Budget—Personnel—General Considerations 176–181
Alumni Association.—Foundation of the Association.—Program of Strauss—Work of the Association. Methods of Government—Social and Economic Reports 182–186

PAGE

E.

HIGHER COMMERCIAL INSTRUCTION IN ITALY.

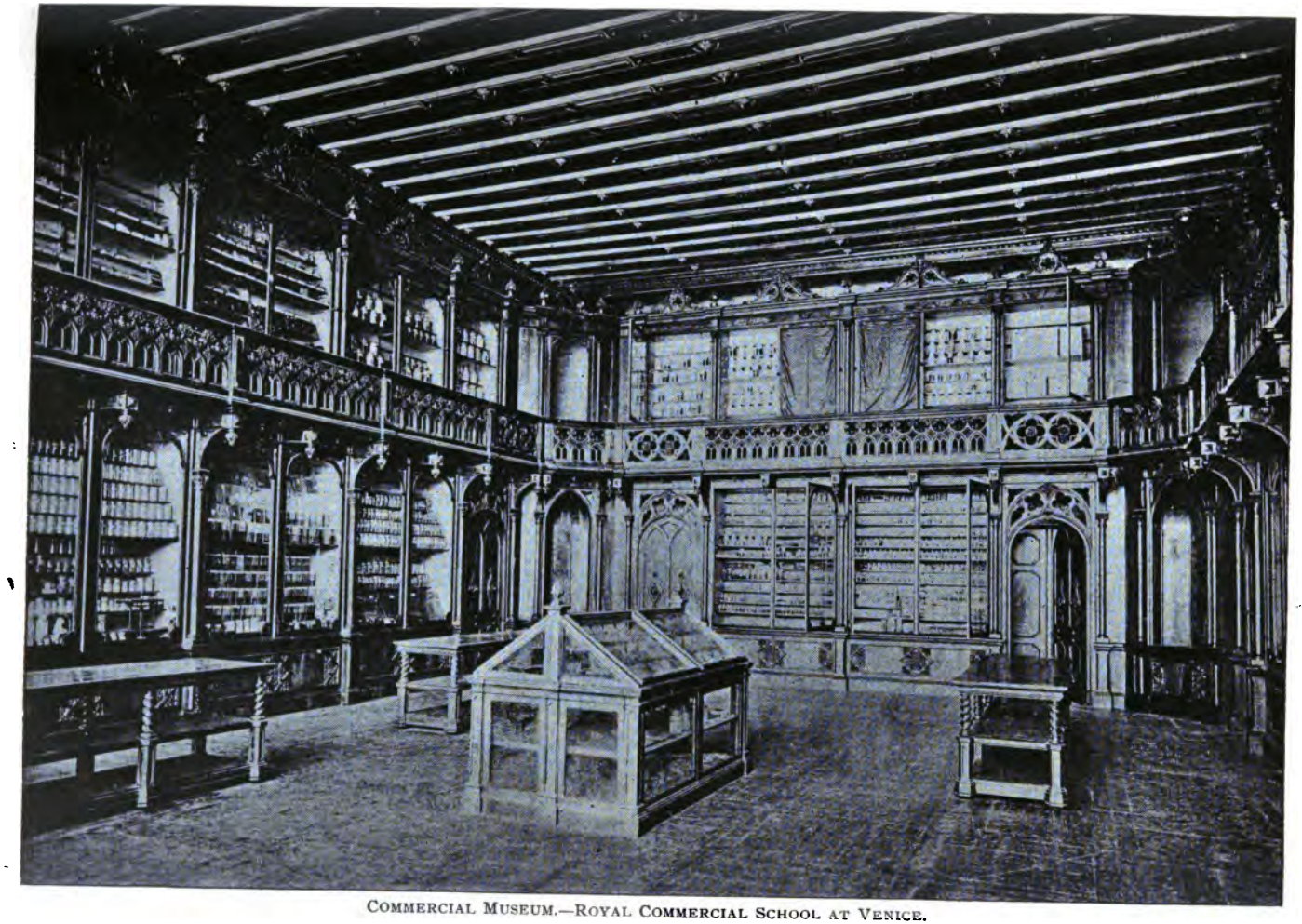
Superior School of Commerce at Venice.
Origin and Development — Divisions of the School — Attendance — Subsidies — Scholarships—Program—Examinations—Government—General Considerations 187–191
General Remarks on Commercial Education in Italy—Florence—Turin—Genoa 192–193

F.

HIGHER COMMERCIAL INSTRUCTION IN ENGLAND.

Backwardness of England in this Line.—Ideas of Sir Philip Magnus.—Commercial Certificates.—London Chamber of Commerce.—Oxford and Cambridge 194–200
Sample Papers set in Oxford Examinations 201–206
Notes on Commercial Education in England—Liverpool Institute—A. T. Pollard—W. G. Blackie—Evidence of Reports on Education as to Displacement of English Youth by Foreigners—Recommendations of Blackie 207–212
Report of J. J. Findlay to Sheffield Chamber of Commerce—Letter of Dr. Carl Wolfrum 213–219
List of authorities consulted 220–223

PALACE FOSCARI.—OCCUPIED BY THE ROYAL COMMERCIAL SCHOOL AT VENICE.



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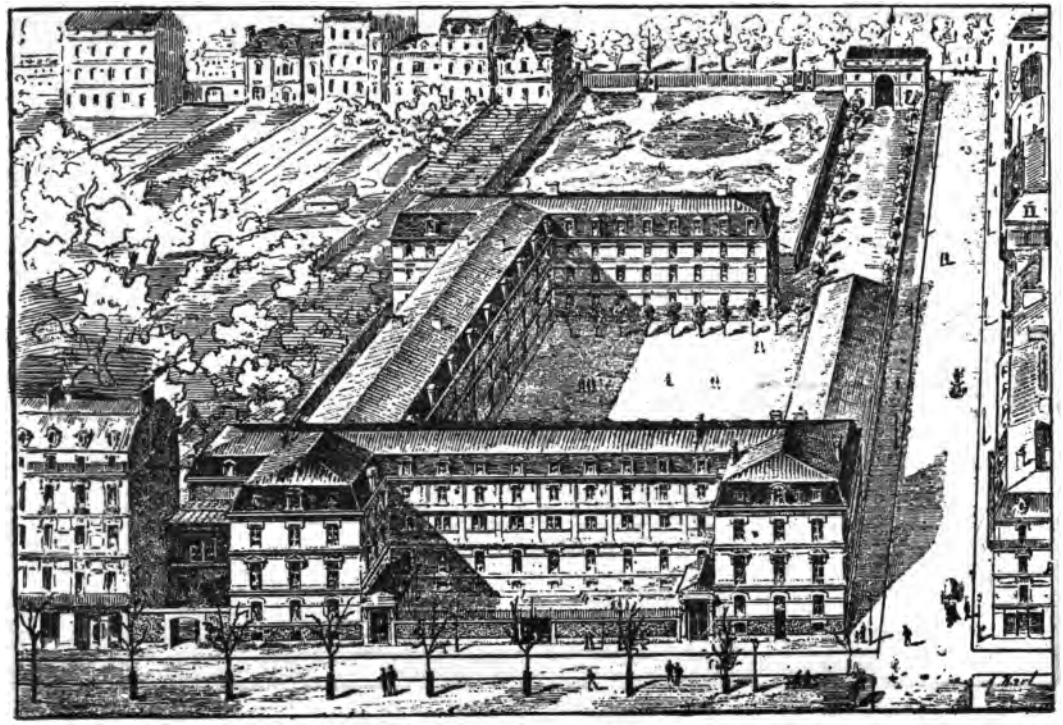

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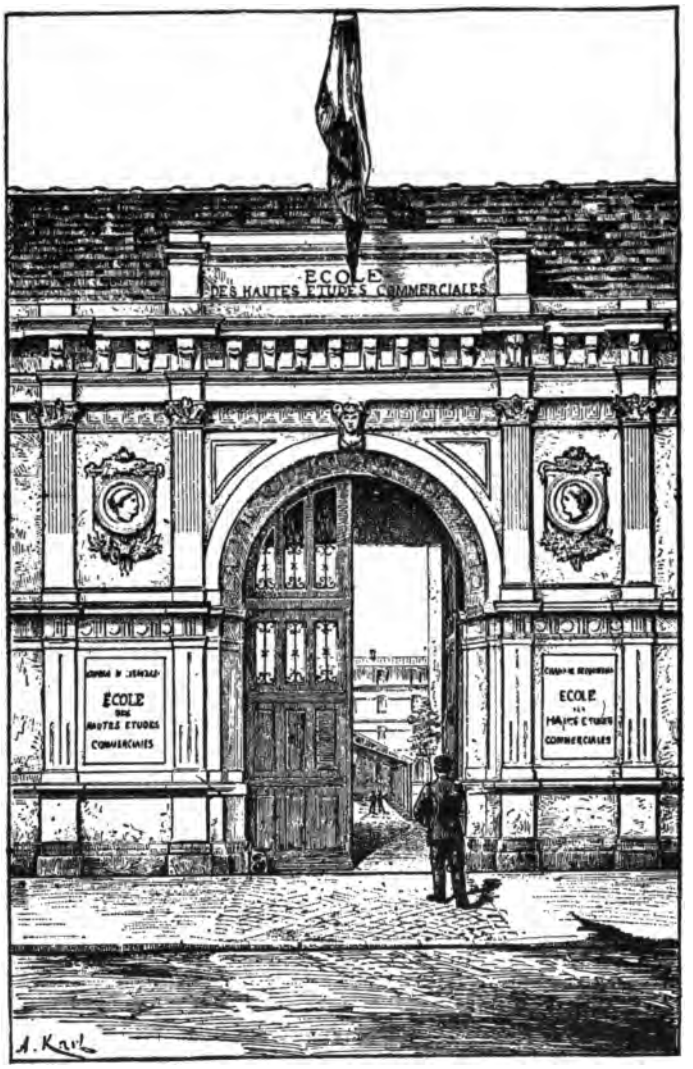
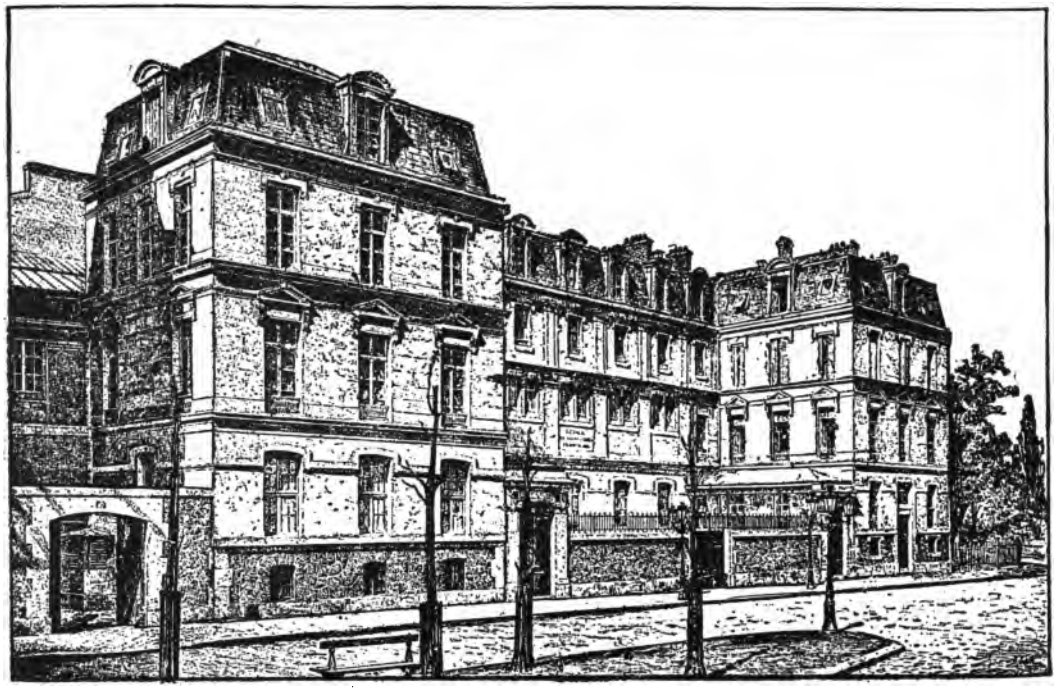
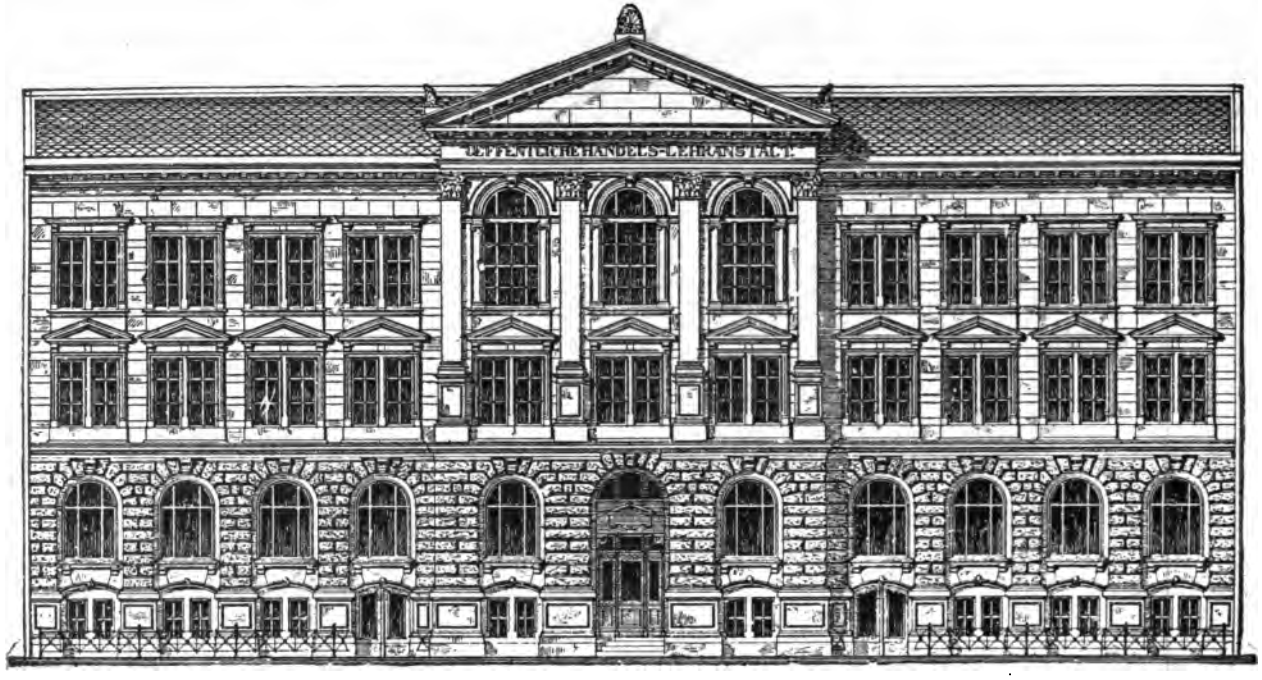


GATEWAY TO SCHOOL OF HIGHER COMMERCIAL STUDIES AT PARIS.



FRONT OF THE SCHOOL OF HIGHER COMMERCIAL STUDIES AT PARIS TOWARD THE RUE DE TOCQUEVILLE.



PUBLIC COMMERCIAL INSTITUTE AT LEIPSIC.

COMMERCIAL EDUCATION IN EUROPE.

PART I.

THE AMERICAN BANKERS' ASSOCIATION has led the way in one of the most important educational departures of this century. It is nothing less than a systematic effort to arouse public attention to the importance of providing for a more extensive and more thorough professional education of our business classes.

As the first step in this work, the association appointed a committee to investigate what was being done, in a systematic way in the United States, toward providing for this great public need of a special education for mercantile and business life. With a full recognition of the admirable work which many of our so called "commercial colleges" are doing, and with the completest acknowledgment that their founders and promoters were the first to see the need of special commercial education and were doing valuable work in supplying it so far as they could, the committee felt that there was a field of education which these institutions were not at all cultivating, and yet which needed special attention. In canvassing the educational institutions of the country, it soon appeared that the Wharton School of Finance and Economy of the University of Pennsylvania was the only institution of higher rank which was busying itself seriously with this educational problem. The committee, therefore, requested the author of this report to give the association an account of the work, aims and methods of the Wharton School. In an address delivered before that body at Saratoga, in September, 1890,* the general situation of business education was discussed and an exposition of the work of the Wharton School was given. So well pleased was the association with the plan there outlined and the report of the work already accomplished, that it adopted resolutions recommending to the colleges and universities in the United States the establishment of similar departments as constituent parts of their organization.

This action attracted much attention and the scheme received the approval of leading college and university authorities, as well as business men.†

Pursuing the same line of work, the association resolved to investigate what was being done in the field of secondary education, corresponding to the work of the Wharton School of Finance and Economy in higher education. As it was generally known that the various countries of Western Europe had done much work along this line, the author of the present report was invited to visit the leading centres of European education, and examine their institutions for commercial education and report

* Education of Business Men. An address before the American Bankers' Association at Saratoga, September 3, 1890.

† See Education of Business Men, I. and II American Bankers' Association, New York, 1892.

upon this subject. In pursuance of this invitation, he visited England, France, Italy, Switzerland, Austria, Germany and Belgium, and the following report incorporates some of the results of his observation and study of this topic. The essence of the report has already been submitted to the association, at its last meeting, in an address delivered in San Francisco, September 7, 1892.*

The object in preparing the various detailed reports which constitute this work was to put the available information relating to these schools, their history, origin, development, curricula, etc., into such a form that any member of this association, or of any similar body, any teacher in the United States, any superintendent of schools, any school board or any other body or individual who might become interested in this subject and who might wish to take the initiative in organizing such schools among us, would find the assistance he needs in taking the first steps toward such an end.

The object of this report, then, has not been to present a complete account of the system of commercial education in Europe, nor complete statistical tables as to number of schools, pupils, teachers, etc.; but rather to select a few typical institutions and describe them so fully that any one who chose to do so by making allowance for the difference in conditions, could reproduce their counterparts here.

The special accounts contain many references to the burning questions of educational policy which will prove of interest to the educational specialist.

It is my opinion that the educational system of the United States would be enormously improved by the introduction of such schools as are described in this report into our scheme of public instruction, and if the American Bankers' Association shall have contributed, even to a small extent, to this great result, it will have deserved the thanks of every American citizen.

I have set forth in the two addresses delivered before the association, in considerable detail, the reasons for believing that a system of institutions of secondary and higher rank, should be organized with a special view of offering facilities for a professional education along business and commercial lines. The schools of secondary rank would be Commercial High Schools, running parallel with our present Literary High Schools on the one hand, and Manual Training High Schools on the other. The schools of higher rank should be of college and university grade, and should be organized in connection with our existing colleges and universities.

The Commercial High Schools could be established by private parties, either individuals or corporations, much as our academies and seminaries are organized and managed now. Some of the most successful of these schools have been thus established in Europe, notably in Paris, Vienna and Turin. Or they might be established by boards of trade, chambers of commerce, trades leagues, or other similar bodies. This also has been a familiar form of organization and support in Europe. Indeed, it may be said that some of the most successful of the European schools have been managed on this plan: The School of Higher Commercial Studies at Paris; the Academy at Prague; and the Institute at Leipsic.

*Education of Business Men. III. A plea for the establishment of Commercial High Schools. American Bankers' Association, New York, 1893. pp. 17.

Or they might be established by the community as integral parts of the public school system. A start has been made along this line at Pittsburg, Cincinnati and San Francisco, in this country; but these schools have not been developed as they ought to be. It is undoubtedly true that in the long run we shall have to rely upon this third form to accomplish the most general and widespread results but there is also just as little doubt that more rapid progress might be made if some private individual or corporation would take up the matter and give us a commercial high school which could serve as a model for our city boards. For the history of education in this country shows conclusively that the spirit of routine and formalism which nearly invariably prevails in any public school system is unfavorable to rapid and thoroughgoing improvement; inasmuch as it is unfavorable to experimentation, and experimentation is necessary to progress.

The systematic and steady development of commercial instruction lies in the interest of our business world; in the interest of the community in general; and in the interest of our public system of education. There is, at present, little opportunity for a youth desiring to enter business life to get any systematic assistance in preparing himself for his future career, if he desires or expects to engage in anything but clerical work. The old system of training young men in the great business houses has almost completely disappeared even in those places in our country where it may have existed; while it can hardly be said ever to have existed at all in most places in this country. Even in the old countries—England, France and Germany—it has broken down—like the apprenticeship system in the trades—and at present the only possible substitute for it seems to be the properly organized commercial school.

It may be said that the best preparation is a good general education of the literary high school and college. This has always been the answer to every proposition to organize professional or technical education. It is essentially the mediæval idea of education, and it dies only very slowly and very hard in the face of modern progress. The best practical answer to it is the fact that practical men as a class will have nothing to do with it. Opportunities for such education have been open to the business classes for three centuries and they have availed themselves of them only to a very limited extent either in Europe or America; while whenever a special education of high rank has been open to them they have shown their appreciation of it by patronizing the institutions which offered it.

The fact seems to be that in every line of educational life, the number of people who will take a very extensive course of study of a purely liberal character is very small indeed; while the number of those who will take an extensive special or professional education is large and continually growing. Indeed, if you were to cut out of our present so-called liberal courses, those persons to whom the study of Latin, Greek, History, Mathematics, Science, etc., is not only a liberal but also a technical pursuit in the sense of preparing them directly for their future work, viz.: teachers, preachers, lawyers, physicians, the number left in these courses would be astonishingly small.

We can conquer the uneducated and half educated people of this country for secondary and higher education only by offering them courses of study which, while they are of a strictly *educational* character in the

best sense of the word, shall also have some bearing on their future every-day life, shall have some direct relation to the work they are called upon to do in the world.

The first aim of an educational system should undoubtedly be to offer general or liberal courses of all grades, and of the very best possible character, and get as many people to pursue these courses as possible, no matter what their future careers. It should, then, go further and offer to those youth who have gone as far as they will in these liberal courses an opportunity to pursue their education still further along lines relating to to their future calling—an education which, if it is based on science and be properly organized, cannot but be liberalizing, no matter if it be technical in the ordinary sense of the term. Nobody can doubt that the training of a properly organized and managed law school is not merely technical or professional in nature but also highly liberalizing—particularly as compared with the training of an ordinary law office. Nor will any one deny that the work of a good manual training or trade high school may be made educational in a very high sense. In the same way the curriculum of a commercial high school may be eminently liberalizing in all its tendencies, at the same time that it trains a youth so that he may be more useful in a business house.

Such a high school may be of great advantage to the youth whose father is able to set him up in business, or by his business connections may be able to start him far up the hill that leads to business success; for it will be able to impart to him much information which he would otherwise obtain in a scrappy way and often not at all until the opportunity to use it had passed him by, and at any rate it would prepare him to acquire quickly the details of his business and help him to co-ordinate his knowledge so as to make it of the greatest use to him. It would, moreover, quicken his interest in all that relates to business, and help make his business life a source of pleasure as well as profit to him.

If such a training would help the youth of fortune and good business connections, it would be of immensely greater aid to the youth who must start at the bottom and has only himself and his own efforts to rely upon. It would enable him to acquire, in a much shorter time, the details of any business he chooses to take up; it would open his eyes to business chances; give him a comprehensive view of the business world and help put him in a position to profit by whatever juncture turned up.

It is said that ninety-five per cent of those who enter business fail at some time in their career, and certainly any business man will confirm the statement that there are far more failures than successes in the business world. These failures come, of course, from many circumstances; but there is little doubt that many of them spring from causes which the proper sort of preliminary training may remove; and if sound business education would serve to turn only ten per cent of these failures into successes, it would pay for itself many times over.

Of course, no commercial high school and no school of finance and economy can make a successful merchant or banker. Nor does a law school make a successful lawyer or a medical school a successful physician; but all three may so train a man that he will enter upon his respective career at an advantage over the man who does not have this training, provided other things are equal. A good commercial training will prepare a boy to learn his business more easily and rapidly than he could have done without it.

But such a commercial training must be really educational in character. What this means, in the domain of secondary education, can be seen if one will take the six months' course of the average so-called commercial college in the United States, and compare it with the three years' course of the schools discussed in the second part of this volume—say of that in Vienna or Prague or Leipsic or Antwerp or of the two in Paris. It is work of this latter character which is at once practical and liberal; which educates for life while it trains for a livelihood, and which should be introduced into our scheme of public education.

It will be noted that all the schools here discussed are really of high school grade, covering the years from fourteen or fifteen to seventeen or eighteen. The only exception is to be found in such courses as the one-year course for graduates of gymnasia or lycées like the one in Vienna and the School at Venice, which may fairly lay claim to be considered of college or university grade. These courses represent really the only attempt to provide for higher commercial courses at all and which, therefore, could come into comparison with the work which would properly fall within the scope of schools of finance and economy.

The real reason for this is to be found, in my opinion, in the general low social estimate set on the business classes in Europe which are relegated to a distinctly lower position in the social scale than the nobility, the army, and the professional classes. Shopkeepers and artisans are classed together, and for neither class is really higher education necessary at all. Of course, this state of things cannot continue indefinitely and there are many signs of its approaching change, and before long we may confidently expect to see courses in commerce in the higher schools of Europe, which will compare favorably with those suitable to schools of finance and economy as discussed in this work.

Attempts have been made to develop courses in business in connection with the other courses in the German polytechnic schools; but as will be seen in the second part of this volume, they have all been so inadequately organized that they have failed of their purpose and are of value to us only as solemn examples to be avoided.

One interesting thing to note is the recent remarkable increase in attendance at French commercial schools. Up to 1890, the certificate of these schools was not accepted by the War Department as entitling the holders to the privileges of the one-year service law, and so boys, who attended them were compelled to pass at least a year or two more in other schools for the mere purpose of passing the military examination, or else they were obliged to serve the full period in the army. This constituted a serious handicap for this class of instruction and accounts largely for the slow growth in attendance for many years. As soon as the certificate of these schools was put on a par with that of other educational institutions of similar grade, the attendance went up by leaps and bounds, showing that it was this artificial barrier which kept them back.

The circumstance mentioned above serves to show the necessity of considering all the facts relating to a school system before drawing concrete conclusions or comparisons. It will be seen, for example, that the higher commercial schools in Germany give more time to certain subjects than the corresponding schools in France or Austria. This does not come, as one might suppose, from a difference in the ideas of the German directors of commercial schools; but simply from the fact that the War

Department refused to receive the certificates of these schools as entitling to the privileges of the one-year voluntary service, until its prescriptions as to certain fundamental subjects were complied with. The whole matter illustrates the far reaching influence of the military system in Europe over every department of life, when even the schools which fit for what is pre-eminently a peaceful vocation must adapt their curricula to the demands of the war office.

The work of the Free School of Political Science, in Paris, is not noticed in this report, because its aim is quite different from that of the other institutions discussed. It is a most admirable school and is well worth the study of educationists. Its work corresponds at certain points with a portion of the work done in the Wharton School of Finance and Economy; but as a purely private institution it stands out of relation to the general system of public education in France, having in an official way no connection either with the secondary system on one hand, nor with what corresponds to our college and university system on the other.

There are some interesting commercial schools in Russia, Holland and some of the other countries in Europe. Russia has what may perhaps be called the oldest commercial school in the world. But as I was unable to visit the other European countries, I thought best not to attempt a description of the schools, relying, as I should have been obliged to do, entirely on the accounts of others.

It will be seen that but little space is given to England or English schools. The reason is plain to one who knows the facts. There is no institution in Great Britain which fairly deserves the name of Commercial High School in the sense used in this report. England is beginning to wake up to the necessity of this sort of education. Boards of Trade, Teachers' Conventions, Educational Societies have all begun to agitate for its introduction. The growing displacement of English youth in the great business houses of London by French, German and even Italian youth began to attract public attention more than ten years ago. Finally, some six years ago the London Chamber of Commerce took up the subject in earnest, and later the Universities of Oxford and Cambridge, and then many other institutions and societies.

Instead of taking hold of the subject at the right end and organizing a great institution in London, which might serve as a model for such schools elsewhere, the English began their work in this field, as in many similar instances, by establishing examinations, and granting commercial certificates to all such pupils as could pass them. As there were no schools where the candidates could prepare for these examinations, they had to wait until existing classical or scientific schools could see their way to the profitable introduction of the commercial side. When a school here and there finally decided to open a commercial department it was found that in all England there were no properly qualified teachers for this work. The outcome of the examinations has been, therefore, most unsatisfactory, and there is talk of abolishing those in connection with Oxford. The London experiment has been the most successful and it seems likely to continue. But the chief advantage from this movement thus far in England has been that it has called public attention to the great need of opportunities for some mercantile education of English youth. There is little doubt that England will shortly take the matter up in earnest, when we may expect excellent results.

There is little doubt that an association like the American Bankers' Association, however, could do an immense amount toward educating the general public as well as bank clerks and officials along a few special lines if it would prepare careful syllabi of courses of reading along banking and financial lines specifying books, order of reading, etc., and then provide for examination to be held on the subjects and the granting of certificates. The Wharton School of Finance and Economy receives letters continually from young men engaged in banks throughout the country asking for aid in pursuing their education along special lines relating to banking and finance: but its circumstances do not permit it to do this work at present. This association, however, could do this service in an admirable way, and if it should undertake it many men throughout the entire country would rise up and call it blessed.

There is, at present, a special reason why we in the United States should provide facilities for adequate education along mercantile lines in the narrow sense of the term. We are rapidly nearing the point in our manufacturing industry when we may expect to compete with England, Germany and France in foreign markets. In this field of enterprise, England is at great advantage because of long possession; France and Germany, because of the better training and education of their youth who enter their business houses in foreign countries. If we wish to find such competition successful, we must be able to find a ready supply of trained men for foreign correspondence and service; men who have had systematic training in foreign languages and in the geography and industries of foreign countries. Such a training it is the business of a commercial high school to give.

The curriculum of a properly organized commercial high school would contain many elements of a liberal character. The history of commerce and commercial institutions, commercial geography with the necessary preliminary work in physical geography, the study of products, the theory and practice of accounting are all subjects of general interest to every educated man whether he is going into business or not; while the study of commercial law in all its ramifications is not inferior, in its liberalizing tendencies, to international law or general jurisprudence itself. Such a curriculum would prove, therefore, a valuable element in our general scheme of education, and would contribute powerfully toward strengthening the hold of our public high school system upon the affections and interest of the community.

PART II.

A.

Higher Commercial Instruction in Austria.

HISTORIC REVIEW.

The history of mercantile instruction in Austria down to the fifties in this century stands in a certain relation to the history of the Real school. The oldest institution which had for its purpose the promotion of instruction in modern subjects was the Real-Handlungs-Akademie in Vienna, whose foundation dates back to the reign of Empress Maria Theresia. This academy, which was intended to train not merely efficient merchants, but also high-class officials for the economic and financial departments of the government, as well as skillful commercial experts, developed in a most happy manner. It was well directed and corresponded completely to the wants of the time, in which lectures on mercantile subjects were delivered to the law students who attended the Theresian and Savoyan academies for nobles. Before the close of the year 1770, in which the opening of this institution took place, the Austrian Government guaranteed a certain support to the institution from the public treasury, and enlarged the curriculum to a two years' course. The plan of study of this institution embraced all those subjects which are now taught in commercial schools, and, in addition, geometry, mechanics, moral and civil law, philosophy and morals. The instruction in languages embraced German, French and Italian.*

The Real-Handlungs-Akademie, in spite of the promising beginning of its activity, did not succeed in maintaining a permanent existence. With the re-organization of the entire system of education in Austria, in 1805, it lost its independent position as a professional school. Under the name of the Real-Akademie it became the first Real school of Austria, which had the third and highest grade of elementary instruction, in a narrow sense of the term, joined immediately onto the fourth class of the normal school.

The object of this curriculum was the education of youth who intended to devote themselves to the higher arts, to trade, to banking and bookkeeping. The subjects which are essential for a commercial institution were limited to the last and highest class—that of the third year.

This last circumstance rendered very easy the new organization which was given to the Vienna Real School in the year 1815, when the government, following the suggestion which Bohemia had given in 1806 by the organization of the first German polytechnic school in Prague, established

* This account is abridged from the *Centralblatt für das gewerbliche Unterrichtswesen in Oesterreich*, VI. Band, Heft 3-4, p. 173 and following.

in that year the Polytechnic School in Vienna. The first two years of the Real School were converted into a general preparatory school for the Polytechnic Institute. The third year was extended to a second commercial division of technology. This arrangement was based upon the correct idea that a merchant needs for his business thorough technological knowledge, while the technologist also needs commercial knowledge. Similar commercial courses to that in Vienna were organized in the Polytechnic Institutes of Krakau and Lemberg.

The commercial instruction in the coast lands developed along entirely independent lines from the above foundations, which were naturally adapted to the interests of the internal provinces of the empire. In Trieste a school of navigation had been in existence since 1774, when the Austrian and Hungarian coast lines belonged to the administrative division of Inner-Austria. In 1811 a division for commerce was added to this school; from the institution thus increased was developed, in 1842, the present Commercial and Nautical Academy in Trieste.

The commercial courses in the technical schools, however, did not succeed in obtaining the hoped-for influence in those circles whose interests they were intended to serve, nor could they correspond to the varied demands of the mercantile classes, which naturally insisted upon a training suited to their various conditions. In order to meet this want, which was naturally felt most keenly in Vienna, the Geyer Commercial School in 1840, and later the Patzelt, were organized as private undertakings, and in 1848 the Corporation Commercial School was organized by the corporation of Vienna merchants. In the southern portion of the empire, the private commercial school in Laibach is worthy of mention.

These institutions satisfied the demand down to the middle of the century, but on account of the general revolution in political and economic life after the year 1848—the development of the railroad and the telegraph, the establishment of great banks with foreign capital, etc.,—it was a natural consequence that entirely different and higher demands were made in the field of commercial education than formerly.

In order to answer these changed conditions, a lively agitation appeared almost contemporaneously in the leading cities of the monarchy for the purpose of establishing higher commercial schools by private and public corporations. This led, in a short time, to the establishment of commercial academies in Prague (German, organized in 1856), Vienna (1858), Pesth (1857). Following these new foundations came later similar institutions in Gratz (1863), Bohemian Academy in Prague (1872), the commercial academies in Linz and Chrudim (1882) and Innsbruck (1887).

The curricula of these higher commercial institutions, among which should be included the Commercial and Nautical Academy at Trieste, were no more nearly uniform in Austria than were those of similar schools in other European countries. The endeavor to secure for the graduates of such schools the privileges of the one-year Military Service Law has led, however, to a gradual assimilation of the curricula in these various institutions, with the exception of the academy at Gratz and the higher public course for mercantile instruction at Trieste.

It may be remarked here that an attempt was made by the law of February 27, 1873, to regulate the entire field of commercial instruction for that portion of Austria below the Enns.

THE PRINCIPAL COMMERCIAL INSTITUTIONS.

1. THE COMMERCIAL ACADEMY IN VIENNA.

A. First Period (From the establishment of the academy down to 1872).

Early in the year 1856, B. W. Ohligs, a manufacturer, made a motion in the Chamber of Commerce and Trades for lower Austria to establish in Vienna a general mercantile institute. He justified the motion by the exposition of the importance of commerce as one of the leading factors of the national economy. While instruction for the technical callings was secured, to a certain extent at least, by various institutions of learning, the professional training of the future merchant was on the whole neglected. This defective mercantile training was, in his opinion, a chief reason why, in spite of the great victories of Austrian industry in international expositions, the trade of Austria was limited almost entirely to internal commerce. The consulates needed men with mercantile training; the commerce of Austria being represented in foreign states by non-Austrian agents and middlemen. The remedy must, therefore, be sought in the establishment of commercial institutions which should be organized to answer these demands.

This suggestion was warmly approved: The proposition by Ohligs was supported by Mr. Frederick Schey, Peter Murman, Theodore Hornbostle, E. Seybl and Edward Drasche. The meeting of the founders, held on the nineteenth of November, 1856, showed that there was no longer any doubt of the success of the undertaking. The government gave its consent on the fifth of January, 1857, to the formation of an Association for the Establishment of a Higher Commercial Institution in Vienna, and for the opening of a general subscription. It was largely due to the efforts of Mr. Frederick Schey that this association, on the twenty-seventh of April, 1857, on the date of its first general meeting, showed a membership of 563, with a fund of 352,780 florins, which had been subscribed for the purpose mentioned. At this meeting the proposed statutes of the association were accepted, and the administrative council chosen. Its first president was Mr. Frederick Schey, who held this position until his death on the fifteenth of July, 1881. The Ministry of Education approved of the Constitution on the twenty-first of October, 1857; the school was opened on the thirteenth of January, 1858, in a treasury building in the Renngasse, in which the Ministry of Finance had granted the use of certain rooms on the nineteenth of March, 1857. The school opened with fifty-nine pupils, and in October, 1858, it numbered 170 regular pupils, besides the pupils in the evening courses, organized for those persons who were engaged in mercantile occupations during the day.

The institution established by the Association of the Vienna Commercial Academy has, in the course of time, undergone many changes, but the general body of statutes of the year 1857 has remained in all essential features unchanged. The Vienna Commercial Academy is the creation of a special association formed for the purpose, and not that of a corporation or of a city like the other commercial academies of Austria.

This association consists first, of honorary members; second, of founders, that is such persons as pay yearly the sum of 315 florins during their lifetime to the support of the institution, or, at least 3150 florins in six equal installments; third, of associate founders, *i. e.*, such persons as contribute sums less than 3150 florins and exceeding 525 florins; and fourth, of members, *i. e.*, such persons as pay a contribution of less than 525 florins. The various classes of members taken together constitute the General Assembly. No member has any special rights, except a founder, who has the right to establish a scholarship, and for twenty years thereafter to name the holder thereof.

The General Assembly chooses the Administrative Council, which consists of twelve members, of whom six must belong to the class of tradesmen and manufacturers.

The Administrative Council chooses from its members a president and vice-president for the term of one year, who are eligible for re-election indefinitely. The Administrative Council chooses the director and the professors of the institution, as well as the subordinate officials and employes. The appointment of the director, professors and other instructors is subject to the approval of the Ministry of Education. The Administrative Council fixes the amount of tuition, assigns the scholarships, and manages the property of the institute. The executive organ of the Administrative Council is the director of the academy. He is entrusted with the scientific and disciplinary management of the institution; he is responsible to the Administrative Council according to the existing general rules and regulations of the association.

The public spirit of Vienna citizens had established the commercial academy. It was of special importance for its further development that the Administrative Council succeeded in obtaining as director, Mr. Franz Hauke, who, a few years before, had been prominently connected with the establishment of the first superior Real schools in Austria. In constructing the curriculum of the institution great difficulties were to be overcome. For one could not, as in the case of the gymnasium, draw upon the experience of centuries in constructing its curriculum. Ohligs had sketched out the first curriculum for a higher commercial institution with a three years' course. This plan was made the basis of the program of the institution on the sixteenth of January, 1857, and will probably continue to form in its comprehensive scope, the ideal of the school. The underlying thought of the three-class commercial institute was retained in the curriculum worked out later, but various circumstances compelled the Administrative Council to make a division in the institution which was, according to the original plan, to have been organized as a unit. The council established four classes, of which the first two were preparatory, while the last two were to form the real academy. This organization was in so far advantageous as the pupils who had not completed the studies prescribed for the academy courses (*i. e.*, the completion of the six-form Real schools or the first six classes of the gymnasium) could obtain the desired preliminary preparation in the preparatory schools, as had been the custom for decades in technical schools. This organization of the commercial academy remained in force from 1858 to 1872, and characterizes the first period of the history of the institution.

We give below the curriculum of the Vienna Commercial Academy of the year 1871–72, and note further the fact that at that time the

instruction in foreign languages was not given by classes, but in three alternating yearly courses.

I. PREPARATORY CLASSES.

SUBJECT.	I. Preparatory Class. Hours per Week.	II. Preparatory Class. Hours per Week.
German	4	4
French, English or Italian	3	3
Arithmetic and Algebra	5	5
Geography	3	3
History	3	3
Physics	2	4
Natural History	3	2
Penmanship	2	2
Total	25	26

ACADEMY.

SUBJECT.	1st Year. Hours per Week.	2d Year. Hours per Week.
Commercial Arithmetic	3	3
Bookkeeping	2	—
Commercial Correspondence	2	—
Model Office	—	8
Commercial Law	4	—
Austrian Laws relating to Trades and Professions	—	2
Political Economy	—	5
Commercial Geography and Statistics	2	2
Modern History and History of Commerce	2	2
Chemistry and Chemical Technology	3	2
Mechanical Technology and Technical Study of Products	2	2
German Language and Literature	2	—
One Foreign Language	3	3
Total	25	29

The Vienna Commercial Academy, as was proper for a professional school, always sought to maintain an intimate connection with practical life, which is evidenced by the regular visits made by the pupils, under the direction of their instructors, to public collections, industrial establishments, and to the great commercial centres of the Orient. As might have been expected, in spite of the high tuition, 150 florins a year, with incidental fees of five florins, the attendance at the institution steadily increased. Pupils came not only from Vienna, but from all parts of the monarchy belonging to the commercial district of Vienna, especially from Hungary, Galicia and Moravia. Pupils who had completed this course found employment very easily ; the government recognized also the high character of the school on the twenty-second of February, 1868, by granting to the graduates of the school the privileges of the one-year military service.

The opening of its own building on the twelfth of October, 1862, was an external sign of the prosperity of the institution. In order to cover the cost of this building a second subscription was opened by the association in 1869, with gratifying results. The other obligations of the school were met from 1871 on, from the surplus which the regular income showed over the regular expenditure.

Encouraged by these favorable circumstances the management next considered plans involving the enlargement of the program of the

school, but these were not carried out until upon the death of the first director, Franz Hauke, on the second of July, 1871, Alois Czedik, of Brundelsberg, was elected director of the academy.

B. Second Period (1872 to 1877).

In this old organization the Vienna Commercial Academy had served especially the wants of those people looking toward banking, although the gradual extension of instruction in natural science showed that the wants of merchants were not neglected. Whoever wished to prepare himself for work in transportation or insurance was obliged to have recourse to other schools existing at that time in Vienna, supported either by the government or by various corporations or companies.

Following the suggestion of the management of the academy the railway companies closed their schools for applicants for positions in the railway service, and the Royal Ministry of Commerce its courses for telegraphic operators. At the same time, in combination with the insurance companies, they offered to the academy large grants of money for the period of six years, in return for which, in the year 1872, the academy opened courses for railway service, postal service, telegraph service and insurance. The curricula were worked out in consultation with the contributing parties; the railroad companies declared those who had completed such a course to be prepared for admission into the corresponding branch of the service.

The problem now was to connect this new course with that of the old academy, which on its part needed some reform. For in the course of time the preparatory classes, which had practically become a two-form intermediate school, were not at all in a position to compete on equal terms with the three-form Real school, or with the four-form superior gymnasium.

The General Assembly, therefore, on the twenty-ninth of May, 1872, upon proposal of the Administrative Council, ordered the reorganization of the Vienna Commercial Academy. In the place of the former unified school, two institutions were now organized, each with its own management and its own body of instructors. The two preparatory years and the first year of the academy were combined into a three year commercial intermediate school. The second year of the academy and the separate courses, mentioned above, were combined into a new commercial institution, called later the "Commercial High School."

A similar organization of the higher mercantile instruction was decreed for Austria below the Enns by the law of the twenty-seventh of February, 1873.

The establishment of the Commericial Intermediate School was approved on the twenty-eighth of June, 1872, by the Ministry of Religion and Instruction. The institution received the name "Academic," and was opened in October of that year. As a condition of admission to this institution the completion of the lower gymnasium or the lower Real school was required. Whoever had not completed these studies at a recognized school was allowed to take an examination upon the subject-matter, provided he had completed his fourteenth year. On next page is given the curriculum of the Academic Commercial Intermediate School for the year 1876:

ACADEMIC INTERMEDIATE SCHOOL OF COMMERCE.

SUBJECT.	Hours per Week. 1.	2. Class.	3.
German Language	3	3	2
French	4	3	3
English or Italian	4	3	3
Geography	3	2	2
History	2	2	2
Mathematics	4	2	1
Commercial Arithmetic	3	4	3
Physics	2	2	—
Chemistry	—	3	2
Natural History	4	—	—
Study of Commercial Products	—	2	3
Correspondence and Office Work	—	5	—
Bookkeeping and Correspondence	—	—	4
Commercial Law	—	—	4
Political Economy	—	—	2
Penmanship	2	—	—
	—	—	—
Total	31	31	31

The chief distinction between this curriculum and that of the former academy is to be found in the fact that in the new institution the learning of two foreign languages was required, in such a way that all the pupils were required to study French, and to choose either English or Italian in addition. From this time on instruction in the foreign languages was given consecutively by classes.

The final organization of the higher division was effected after a one year's trial, 1872–73, on the basis of the "Organic Statute," which was modeled after that of the technical high schools of Austria, and was approved by the Ministry of Education on the twenty-eighth of July, 1873. This new institution bore the name "Commercial High School." A curator was appointed as the representative of the Administrative Council, whose business was a general supervision of the management of the institution. Herr Czedik was appointed to this position, which he held during the entire existence of this school. The immediate direction and government of the institution was vested in the body of professors, who elected each year from their midst a rector, such election being subject to the approval of the Administrative Council, and the ratification of the Ministry of Religion and Instruction.

The Commercial High School was divided into three divisions: the first for banking (including insurance and mortgage banks); the second merchandising (including express shipping and manufacturing); and the third for transportation (including railways, post and telegraphs).

Four semesters were required to complete the course of the Commercial High School. The principle of freedom of study and freedom of teaching was established. A distinction was made between the regular and special students. Only those were accepted as regular students who presented a certificate of graduation from an intermediate school, or who could pass an examination upon an equivalent course (though this latter provision was limited to the duration of three years), and only those students were permitted to pass this examination who had completed their eighteenth year. Whoever could not fulfill these conditions might be enrolled as a special student, if he were at least eighteen years of age. Most of the pupils in the railway, postal and telegraph courses were special

students. Such students did not receive certificates of graduation, but merely certificates of attendance.

The examinations of the regular students were divided into term examinations at the end of each semester, and final examinations, of a severe character, for those who had completed four semesters in the Commercial High School. Those students who had passed the severe examinations in all subjects of the respective courses received a diploma.

Those pupils in the transportation courses who were preparing themselves for railway, postal and telegraph service were allowed to pass special examinations before special examining commissions appointed by the Ministry of Commerce and the Austrian railway managements who contributed to the support of these courses.

In order to show the character of the Commercial High School, we print below the list of lectures for 1875–76:

List of Courses of Instruction offered in the Commercial High School for the School Year 1875–76.

I. WINTER TERM.

A. BRANCHES RELATING TO COMMERCE, COMMUNICATION AND TRANSPORTATION.

		Hours.
1	Commercial Arithmetic	3
2	Political Arithmetic	2
3	Bookkeeping: Theoretical part	4
4	Bookkeeping: Practical work in mercantile and manufacturing business	6
5	Study of Usage and Casting of Produce	3
6	Life Insurance and Annuities	2
7	General Study of Products (W. T.)	5
8	Mechanical Technology	3
9	Chemical Technology, including the study of chemical products	3
10	Theory of Electricity in its Application to Telegraphy	3
11	Practical Exercises in Telegraphy	6
12	Telegraphic Service	2
13	Railroad Technology	2
14	Freight Traffic (W. T.)	5
15	Passenger Traffic (W. T.)	5
16	Postal Laws and Postal Service	6
17	Commercial Correspondence	2
18	Calculation of Exchange, with special reference to the most important commercial centres (W. T.)	1
19	Railroad Statistics (W. T.)	3

B. POLITICO-LEGAL SUBJECTS.

20	Commercial Law, including that of Bills of Exchange	4
21	Law of Bankruptcy	1
22	Maritime Law	1
23	Tariff Laws of Austria and of leading foreign countries	1
24	Civil Law	3
25	Elementary Law	1
26	Railroad Law (W. T.)	5
27	Theory of Commerce	2
28	Political Economy (W. T.)	3
29	Austrian Constitutional and Administrative Law (W. T.)	2
30	General Course in the Political Sciences	4
31	Law Relating to Trades and Professions (W. T.)	1

C. HISTORICO-GEOGRAPHICAL SUBJECTS.

		Hours.
32	General History of Recent Times	3
33	History of Commerce	1
34	History and Development of Railroads (W. T.)	2
35	Commercial and Industrial Geography	3
36	Railroad Geography	2
37	Commercial and Industrial Statistics (W. T.)	2
38	Geographical Exercises (W. T.)	1

D. LINGUISTIC AND GENERAL SUBJECTS.

39	German Literature	2
40	General Chemistry	3
41	French: First Course	3
	Second Course	3
42	English: First Course	3
	Second Course	3
43	Italian: First Course	3
	Second Course	3
44	Stenography	2

II. SUMMER TERM.

The courses given in the Winter Term, with the exception of those followed by W. T. in the preceding list, were also given in the Summer Term, and in addition the following courses:

		Hours.
45	Insurance against Damage	1
46	Telegraphic Exercises in Signaling	2
47	Bookkeeping:	
	a. In a Bank	6
	b. Railroad Bookkeeping	2
48	Laws Relating to Shipping and Freight Business	1
49	Political Economy Seminary	3
50	Finance	3
51	Railroad Administration	3
52	Railroad Economy	2
53	Railroad Tariffs	1
54	Operating Rules	1
55	Law of Transportation	1
56	Law Relating to Obligations	1
57	International Law	3
58	Commerce Statistics	2
59	International Law concerning Bills of Exchange	1
60	Motors	1
61	Exchange and Banking Operations	2
62	Commercial and Industrial Policy, with special reference to Austria	1

These two institutions of the Association of the Vienna Commercial Academy existed, however, only for a short time: the intermediate school for five years, the high school for four. The serious results of the financial crisis which occurred in May, 1873, and the circumstance that the government and the contributing private companies, after the close of the first period, withdrew their grants of aid, compelled the management of the Vienna Commercial Academy to undertake a reorganization of the institution. The Commercial High School, in which for each of the leading subjects two men had been appointed, had been organized on too great a scale for existing conditions. On the other hand, the feeling grew steadily in the commercial world that the Academic Commercial Intermediate School was a purely intermediate school of a general character, and not a professional school; because it formed only a preparation for admission into the Commercial High School, and on this account limited the commercial subjects in its courses to a minimum. The public was,

moreover, opposed to a five-year course of instruction as being too long, and the graduates of the intermediate school entered the high school only in very small numbers. The consequence was the reorganization of the high school and the intermediate school. The first step taken was the reorganization of the Commercial Intermediate School, and the making of it, in accordance with the wishes of the classes whose interests it was to serve, a real professional school, while from purely financial considerations the place of the Commercial High School was taken by a separate course of one year for those young men who were over seventeen years of age, and who could show evidence of an adequate liberal training. Both institutions were again put under the management of the same director, thus establishing a unified control and management. As the position of curator was given up with the discontinuance of the high school, the instructing body was again made the same for both institutions. These changes were accepted in the General Assembly on the twenty-fifth of June, 1877, and were approved later by the Ministry of Religion and Instruction.

C. Third Period (1877 to 1893).

The third and latest period of the existence of the Vienna Commercial Academy coincides with the presidency of the privy councilor, Dr. Rudolph Sonndorfer, who had been a professor in the Commercial High School, and was at the same time for the year 1876–77 director of the intermediate school. In this double position he laid the plans for the reorganization of the institution and carried them out with the beginning of the school year of 1877–78.

In the following pages is given a view of the development and organization of the institution during this period, taking up each division separately.

a. The Academy with a Three-year Course.

The object of the three-form academy is the acquisition of a higher commercial training, with due regard to those subjects of a general education, acquaintance with which may be fairly demanded of every merchant. It is, therefore, not an intermediate school which prepares for a high school, but is itself a technical school, which turns out its students furnished with a theoretical training directly into practical life.

Those students are admitted who have completed the first four classes of a gymnasium, or of a Real school. Such pupils, after completing the courses of the Commercial Academy, enjoy the privileges of the one-year Military Service Law.

Those persons who cannot present certificates covering the courses of study, described above, but have at least completed the common schools and are fourteen years of age, are admitted to an entrance examination, in which they must show a range of knowledge corresponding to the courses of study in the institutions mentioned above. The number of those pupils who are admitted on the basis of the entrance examination is steadily decreasing.*

The yearly tuition in this department, as in the graduate department †

* In the school year 1877–78, of 149 pupils who were admitted to the first-year's course only forty-seven per cent had completed the required preliminary studies in a recognized school. In the year 1887-88, on the contrary, of 232 admitted to the first year's course, 209 or ninety per cent had completed the required studies in such a school.

† Compare the organization of the same on page 12.

is 160 florins, the matriculation fee, three florins. There are, however, many scholarships and remissions of tuition, which make attendance at the school possible for poor pupils, and, therefore, open to them the opportunity of entering a mercantile career.

Owing to the age of the pupils and the object of the school, namely, to train efficient merchants, the most rigorous discipline is enforced in the three-form academy. For the same reason the system of final examinations was given up, which was characteristic of the former academy, and the pupils are now examined throughout the entire year. To carry out this idea more fully, reports are prepared by which the families of the pupils are kept in continuous knowledge of their school work.

Corresponding to the purposes of the school the subjects of instruction are divided into two groups; the professional subjects and the liberal subjects, between which foreign languages form a certain union, as they are learned chiefly for the purpose of mercantile correspondence. The curriculum of the new academy shows, in comparison with that of the old one, a very decided advance, in that it has not merely the training of young people for banking in view, but owing to the changed conditions of the times, it has in view, to a far greater extent than formerly, the wants of those who expect to enter merchandising, chemistry and chemical technology. The study of commercial products and chemical technology are taught in the new, as they were in the old academy.

The application of the knowledge thus acquired to the demands of business life is, however, first made possible by the knowledge of mercantile usage and the study of products, because in this way the knowledge of the basis of commerce, namely, the classification of goods, freight rates, etc., is first brought home to the student. This subject completes in a certain way the instruction for merchandising. It was introduced into the high school by Dr. Sonndorfer, and was retained in the three-form academy. In the year 1880–81 tariff legislation and administration was also introduced as an elective branch of study. The development of instruction in the knowledge of commercial products will be discussed more fully later.

In the table on page 19 the number and distribution of the subjects of instruction are given. Details will be found in the catalogue of the academy. It should be mentioned further that for those pupils of the first class that have completed the lower gymnasium, and therefore, as a rule, have no knowledge of French, a separate course in French has been organized, attendance at which, however, is not required of the pupils.

That the organization of the year 1877 corresponds to the wants of the commercial world, and gives guarantee that the pupils who graduate possess the necessary general education is shown by the continued and growing approval which the reorganization of the Commercial Academy has received from the public.

The details concerning the various relations of the pupils are given on pages 30 and 32. It appears from them that the pupils in the three-form academy come mostly from Vienna and lower Austria; they come in considerable numbers from Hungary, Moravia, Silesia, Bohemia and Galicia. Foreign countries send from twenty-five to forty pupils; it is plain, therefore, that the three-form academy is not by any means of merely local importance. The institution receives from Hungary and the States along the lower Danube a considerable number of pupils, who are, however, often defective in preliminary training. As

it lies in the interest of the commerce of the monarchy, and especially of Vienna, that these elements should be attracted, the academy established some years ago a special preparatory class in which such young people have an opportunity to make good the defects of their training, and especially to learn the German language. The number of hours has been fixed at twenty-eight per week.*

Special importance is given in the curriculum to instruction in German, French and mathematics. Besides these subjects geography, history, physics, natural history and penmanship are taught. The instruction is given with reference to the purpose of the professional school which the young people intend to enter in the following year. The entrance examination for the first class of the academy is held at the end of the school year.

b. One-year Course for the Graduates of the Gymnasia and Real Schools.

This course has developed from a small beginning into an institution which answers the demands of wide circles. It was intended originally for such youths as were, at least, seventeen years of age, and had pursued an extended course of liberal training. At present it performs the functions of enabling those young men, who, after graduation from the gymnasia or Real schools, wish to pursue commercial studies, to complete the course in these branches within one school year. All the subjects of study are prescribed.

In order to ensure success in the prosecution of the studies, attendance at the exercises is insisted upon. At the end of the year examinations are held, which every pupil must attend who wishes to obtain a certificate. Certificates of mere attendance are not given. Only those pupils are admitted to these examinations who have attended during the entire school year all the prescribed recitations. The program of studies is given below. It will be noted that each pupil is required to learn one foreign language, and to pass an examination upon it at the end of the year.

This graduate course gets, as a rule, most of its pupils from Hungary; then come Vienna, Moravia, Silesia, Galicia and Bohemia. In some years, however, Vienna and lower Austria have stood third and fourth in the list. It is notable that between forty and forty-eight per cent of the pupils are of non-German birth. This fact illustrates the position of this graduate course in the general scheme of commercial instruction in the monarchy, and shows that the idea underlying this course is a very fruitful one for very many different classes.

CURRICULUM.

A. ONE-YEAR COURSE FOR GRADUATES OF GYMNASIA AND REAL SCHOOLS.

A. PRESCRIBED SUBJECTS.	Hours per Week.
Political Economy	2
Commercial Geography and Statistics	3
Commercial and Industrial Law	3
Bookkeeping and Correspondence	6
Mercantile and Political Arithmetic	5
Study of International Trade	2
Study of Products	2
Life Insurance and Insurance against damage	1

* See p. 27 for curriculum.

B. ELECTIVE SUBJECTS, of which two at least must be taken, and examination passed in one.

	Hours per Week.
French—First Course using the German language as the medium of instruction	3
French—Second Course using the French language as the medium of instruction	3
English	3
Italian	3

C. OPTIONAL SUBJECTS.

Customs tariff legislation and administration	2
Penmanship	1
Practical work in Laboratory for the study of products	

SYNOPSIS OF CURRICULUM IN THE ONE AND THREE-YEAR COURSES IN THE VIENNA COMMERCIAL ACADEMY.

A. ONE-YEAR COURSE.

Political Economy.—In the lectures on this subject the object kept in view is to acquaint the student, in a manner corresponding to his thorough preparation, with the laws of wealth, and especially with the influence of the same on industry and commerce. The most important facts of the history of Political Economy and its doctrines are discussed, and special weight is laid on the relation of these facts to contemporaneous events in the world's history. Following this, the fundamental principles of the production, exchange, distribution and consumption of goods are explained, and the manifestations of these laws in Political Economy. This is done in accordance with the object of the school, viz., special attention is given to those subjects which belong to commerce and industry; in particular, the money standard, stocks and bonds, banking, transportation, the railroad question, and, finally, the tariff question.

This course of lectures is closed by a discussion of commercial crises, their causes and phenomena.

COMMERCIAL LAW, LAWS OF BILLS OF EXCHANGE AND LAWS RELATING TO TRADE.

When it is desired to give students a special legal training, who do not possess any previous general knowledge of jurisprudence, one must continually strive to show how the law to be discussed and its precepts are the results of the needs of life and trade, in order to awaken a lively interest in the subject and to make possible a correct understanding of legal decisions.

The lectures begin with the regulations relating to bills of exchange, because these form a complete whole, and are acknowledged to be a masterpiece of legislation, and consequently rapidly familiarize the students with legal forms and terms. A preliminary study of the fundamental principles of the history of bills of exchange and of laws relating to them, and also the management of institutions for dealing in bills of exchange, is followed by an explanation of the separate laws with special regard to the needs of practical life.

After this is studied, in the same manner, general commercial law, in the course of which reference is made to those parts of the general civil law which are of interest in this connection, as well as to those parts of commercial law and usage which are not yet codified. This course is closed by a short description of the principal laws in force relating to trades and industries.

Commercial Geography and Statistics.—Commercial geography considers the earth as an economic unit and the single States as economic factors in the great organism of the world's economy. It shows how production, industry, commerce and trade of the separate peoples develop themselves on the basis of geographical, ethnographical and geological conditions.

In the lectures on commercial geography and statistics, the European countries, as also the most important countries outside of Europe, are thoroughly treated in a manner based on the advanced preliminary preparation enjoyed by the students.

Textbook: Dr. C. Zehden, Handelsgeographie.

BOOKKEEPING AND CORRESPONDENCE.

a. Bookkeeping.—Exact explanations and detailed illustrations in respect to form, arrangement and object of the separate books are given. Following this, complete accounts in merchandise, commission, forwarding, manufacturing and banking are worked out; accounts current with interest computed according to the different methods with special attention to that method of reckoning which offers the greatest advantage and convenience to a firm in any of the above businesses; private, suspense and joint accounting in mercantile and bank business; and, finally, accounting and balancing for ordinary partnerships and limited and joint stock companies.

Textbook: R. Schiller, Lehrbuch der Buchhaltung.

b. Correspondence.—The instruction in this study has for its object the giving to students a correct knowledge of the varied incidents of a mercantile business, about which a written correspondence is necessary, and to acquaint them with the forms of business letters.

The students are trained in the composition of letters on mercantile, consignment and commission transactions, together with the necessary invoices and account of sales; also letters concerning insurance and forwarding goods; letters on bills of exchange, on referring to drafts for the writer's own or other accounts; on sending drafts for acceptance, forms of indirect bills of exchange, protesting notes, collateral acceptances, lost drafts, remittances, transmitting stocks, together with notes and bills belonging thereto, consignments in specie, making payments, checks (or bank-bills), treasury bills, mortgages, checks, rebates, endorsing bills of exchange, joint accounts and bank transactions, letters of inquiry, dunning letters, circular letters, letters of credit, advertisements, legal letters and letters relating to bankruptcy.

Textbook: A. Kleibel, Lehrbuch der Handelscorrespondenz.

Commercial Arithmetic.—Discussion of the most important modern measures, weights and coins; the method of computing discount and interest; the computation of accounts current according to the different methods in practice; the calculation of the value of gold, silver and coins. The foreign exchange and stock computations according to the usage in Vienna, Amsterdam, Berlin, Frankfort-on-the-Main, Hamburg, London and Paris. Explanations of the stock exchange (prolongations, transactions, computation of arbitration and equivalents in foreign exchange, stocks, paper, gold and silver).

Textbook: R. Kathrein, Kaufmännische Arithmetik.

Political Arithmetic.—Computing compound interest and interest on public rentes with payment of interest before maturity and after maturity,

computation of annuities, mortgage loans, preference and lottery loans, forming plans of sinking funds, explanation of the conversion of loans.

Knowledge of International Commerce.—The object of the lectures on this subject is to give the student a concept of the world's commerce, and to equip him with such knowledge as is necessary to successfully engage in international trade.

In these lectures are treated: The origin of the produce exchange, its divisions and organization; the brokers and their position on the exchange; legitimate commercial transactions on the exchange, and the exchange boards of arbitration.

The legal regulation of a system of weights and measures; the metric, English, Russian and Chinese systems of weights and measures with special regard to their position in the world's commerce. The system of weights and measures of the Orient.

The method used to determine quality in the international grain trade; methods of determining quality of yarn and silk in international commerce (numbering yarn and silk titration); alcoholometry and number-measuring (dozen, score, etc.).

The systems of money of those European countries through which balances with trans-marine countries are mainly adjusted; in addition the state of the money standards, bills and currency-quotations in North, Central, and South American markets; also the eastern Asiatic and Australian markets; and, finally, the money standard in the Orient.

The transportation of goods by railroads and rivers, considering: The traffic rules; the railroad fares and freight rates; classification of freight in Austria-Hungary, Germany and France; the international tariff association; the international service, together with the necessary documents.

Ocean transportation of freight, subdivided into: Registering, classifying and measuring ocean vessels; the manifest; the book of cargo; and the bill of lading; letter of conveyance; charter-party; tonnage; fixing freight rates; the most important steamship companies, their lines and fares; the marine freight insurance.

The price quotations of the most important articles of commerce (grain, flour, spirits, petroleum, cotton, coffee, sugar), on the world's market, together with the usages in vogue for cash and time sales. The explanation and computation of equivalent prices, and the construction of equivalent price tables.

The explanation of the settlement of balances by exports and imports is illustrated by a series of examples taken from actual transactions.

The basis of these lectures is a book by Dr. Sonndorfer, "Die Technik des Welthandels." Handbüch der Internationalen Handels-Kunde Wien, Alfred Hölder, 1889.

Knowledge of Goods.—On the basis of the advanced preparatory study of the natural sciences, and after introductory remarks (system, methods of investigation, microscopy, polarimetry, structural arrangement of organic, vegetable and animal substance) from the purely commercial standpoint, the products of the world's market are considered according to their natural history, and physical, and chemical characteristics; after being classified their external and internal marks of genuineness, and their adulteration and substitutes are considered. After this preparation, the entire animal, mineral and vegetable products are separated into their organic branches and discussed, but the Austrio-Hungarian articles of

export and import are given special attention (groceries, foods, luxuries, drugs, raw materials, manufactures of textile industries and tanneries); besides organic products technically applied, (coal, petroleum and metals).

In addition, special instruction on the adulteration of food and the detection of the same is also given.

PRACTICAL EXERCISES IN THE LABORATORY FOR STUDY OF PRODUCTS.

Training in the Use of the Microscope.—Microscopical tests are thoroughly carried out for determining raw material and manufactures. The material for these microscopical examinations is taken from the collection of products and from objects sent to the school by merchants. To aid in the lectures, demonstrations and practical exercises, there are a special laboratory for the study of goods, with a sample collection for direct use during the teaching, a museum of merchandise and a professional library.

Insurance.—Insurance in general, insurance companies, mutual and stock companies, granting of charters to them, the State's control of them, laws relating to insurance and their fees to the State.

Insurance Against Damage.—Transportation, fire, hail and animal insurance, also re-insurance.

Life Insurance.—(Insurance payable at death and insurance payable at a certain age, mutual insurance, insurance against sickness or helplessness, accident insurance), computing the premium, the reserve, redemption, loans, policies and reductions.

The insurance business in its practical workings, closing accounts (profit, loss and balance accounts).

THE FRENCH LANGUAGE.

As a large number of students, when they enter the school, possess an adequate preparation in French, the instruction in this language is divided into two courses, viz: In the first course the instruction is given in German, and in the second course the instruction is given in French.

a. First Course: This course presupposes none, or only very little preliminary knowledge of French. Consequently the instruction begins with the pronunciation, and along with this the elements of etymology are explained and by a series of carefully selected examples the pronunciation and etymology are practiced.

In the second semester, the construction of sentences in general and the most important parts of syntax are treated, and in this work continued oral and written practice is required. For practice in correct writing and in order to familiarize the students with the most important commercial expressions, mercantile letters are dictated in French. These are discussed, corrected and translated into correct French; special weight is laid on rapid translations from French into German.

Textbook: Dr. Filek Edler v. Wittinghausen, Elementarbuch der französischen Sprache.

b. Second Course: Extending and supplementing the syntactical knowledge. Brief review of the entire grammar, entirely in French; at the same time written exercises, which, through their methodical and graded arrangement as well as through their number and variety, are most suitable to familiarize the students with the ordinary forms of the language. Translation of classical selections from French into German

and vice versa, with special regard to the different moods of both languages. Continual translating of German letters into French, paying careful attention to the difference in the commercial expressions; composition of business letters and somewhat long, independent exercises in French. Every week, reading in French from the market and exchange reports.

Textbook: Bechtel and Hertzog. "Französische Conversations grammatik für commercielle Lehranstalten."

THE ENGLISH LANGUAGE.

The instruction begins—as the students are presupposed to have no preliminary knowledge of the subject whatever—with the very rudiments of the language, viz, with the explanation of Walker's phonetic signs, in order that the students may be able to read even before they have systematically learned the rules of orthöepy.

Following this there is given a concise statement of the grammatical rules which are practically applied by means of the selections for reading and translating given in Part I. of the Textbook. In this manner the students acquire, even in the first semester, a complete survey of the entire etymology, together with an elementary knowledge of the grammar and syntax, as well as a large number of the ordinary forms of expression. They also acquire no inconsiderable rapidity in reading and translating.

In the second semester Part II. of the Textbook is begun. At first the most important rules for reading are explained, and this is followed by a thorough treatment of the grammar and syntax, which are methodically subdivided for this purpose. In connection therewith, these theories are applied to the selections for reading and translating. These selections treat almost exclusively of economic or commercial subjects, now in separate sentences, now in longer, connected selections in which the terminology used in business intercourse and commercial correspondence predominates.

This part of the instruction occupies two hours a week, while a third hour is devoted to reading some English work written in a modern conversational style.

The above course sufficiently prepares the student in this subject for the first requirements of a business calling, and at the same time the directions given place him in a position that by means of further self-activity, he can acquire complete knowledge of the language.

Textbook: H. Berger, "Lehrbuch der englischen Sprache."

THE ITALIAN LANGUAGE.

As the students are supposed to have absolutely no knowledge of the Italian language, the instruction begins with the elementary rules of pronunciation and grammar.

The first month is devoted to written exercises in the synonyms and derived words, by means of which the students acquire a vocabulary. Following this the text of the elementary grammar is taken up. In conjunction with the above, the regular and irregular verbs are begun so that by the close of the school year the student is perfectly conversant with the most important verbs of the language.

All the fundamental rules of the Italian language are thoroughly studied, and practically applied in translating suitable selections from the German into the Italian, and vice versa. In this, special attention is paid

to the Italian syntax. The syntax itself is treated in a special discussion and illustrated by means of classical selections from the Italian language, committed to memory. From this time on the students attempt to express their thoughts orally in the Italian language, paying special attention to the language of ordinary conversation, commercial terms and the most important business correspondence; letters about exchange and letters of advice.

In addition to all this it is never neglected to specify to the students books of assistance and a suitable method to pursue, which will enable them successfully to continue their studies in the Italian language without assistance.

AUSTRIAN REGULATIONS IN REGARD TO THE CUSTOMS AND STATE MONOPOLIES AND DETAILS OF CUSTOMS ADMINISTRATIONS.—The bases of the lectures are:

a. Austrian regulations with regard to customs and State monopolies, especially those requirements which must be observed in import and export trade with foreign countries.

b. The general Austro-Hungarian customs-tariff and the legal requirements which it is necessary to observe in applying the tariff.

c. Special directions about giving credit at the custom-house, refunding duties, liability; authority over the details of customs administration.

d. Directions in regard to dutiable commerce on railroads, steamboats and the railway postal system.

e. The form of bills of entry, as well as the legal punishments for false declarations.

f. The commercial and customs treaties, which are made between Austro-Hungary and foreign countries, and which are of special advantage to industry and commerce.

Textbook: Franz Holzer, Praktische Darstellung der österreichischen Zollordnung u. Zollmanipulation.

B. THREE-YEARS' COURSE.

FOR PUPILS WHO HAVE FINISHED THE COURSE IN THE LOWER GYMNASIUM, THE REAL-GYMNASIUM OR THE LOWER REAL-SCHOOL.

The three-year course of the Vienna Commercial Academy, as noted above, has for its object to guarantee to the students (graduates of lower-gymnasium, real-gymnasium or lower real-school) who wish to devote themselves to a commercial career, that higher commercial professional education, with special attention to general educational subjects, which to-day can be rightfully demanded of every merchant. The academy has a three-year course of study, and each year's class is divided into parallel divisions according to the number of students. The students receive a certificate for each year completed, and when they have finished the course they have the privilege of the one-year voluntary service law.

I. COURSE OF STUDY.

a. Required studies:

FIRST YEAR'S COURSE.	Hours per Week.
German	3
French	3
English or Italian	3
Commercial Geography	2
History	2
Mathematics	4
Commercial Arithmetic	3
Commercial Knowledge and Work in the Model Office	3
Physics	3
Natural History	2
Penmanship	2
Total	30

SECOND YEAR'S COURSE.	
German	2
French	3
English or Italian	3
Commercial Geography	2
History	2
Mathematics	2
Commercial Arithmetic	3
Bookkeeping	4
Letter-writing	2
Commercial Law and Laws Relating to Bills of Exchange	2
Chemistry and Chemical Terms	3
Study of Products	2
Total	30

THIRD YEAR'S COURSE.	
German	2
French	3
English or Italian	3
Commercial Geography and Statistics	2
General and Commercial History	2
Commercial Arithmetic	3
Political Arithmetic	2
International Trade and its Usages	2
Model Office	5
Commercial Law and Laws Relating to Trade	2
Political Economy	3
Study of Products	2
Total	31

b. Elective studies:

1. Practical work in the chemical laboratory:
   Four hours per week for the second and third years.
   Tuition.—Ten florins per semester.
2. Practical work in the laboratory for study of products:
   For the third year students.
   Tuition.—Five florins per semester.
3. Study of customs laws and practical work in details of customs administration:
   For students of third year, two hours per week.
   Gratuitous.
4. Stenography:
   In two one-year courses, each two hours per week.
   Gratuitous for all students of the academy.

II. DISTRIBUTION OF THE SUBJECTS OF INSTRUCTION.

First Year's Course in the Academy.

German.—Review of the grammar, prosody and metrics; poetical etymology. Long selections for reading; analyzing their contents. Practice in declamation. Every two weeks a composition requiring home and school preparation. Three hours per week.

French.—Review of etymology together with related oral and written exercises, dictations, analytical and commentary lectures. Extension of stock of phrases and vocabulary. Every two weeks alternating home and school tasks. Three hours per week.

English or Italian.—Study of pronunciation and inflection in systematic succession. The etymology and sentences from the syntax which are necessary to an understanding of simple selections for reading. Practice in pronunciation and etymology by dictation and simple reading exercises. Oral and written exercises, acquiring of a suitable stock of phrases and words. Every two weeks alternating home and school tasks. Three hours per week.

Commercial Geography.—A clear presentation of the most important ideas of mathematical and physical geography, especially those ideas which concern the mercantile profession. Commercial geography of Austria, Hungary, Germany, Switzerland, taking up their geographical situation, topographical situation and configuration of the different countries, climate, fertility of the soil, commercial products, where and how they occur, condition of population, commercial ability, commercial language, emigration and immigration, agriculture, industrial, commercial, financial and trade systems of each country. Discussion of the most important commercial cities, seaports and manufacturing centres; trans-marine means of communication, imports and exports. Two hours per week.

History.—General view of the principal historical events of the world, with special attention to the history of civilization. History of the Middle Ages up to Charlemagne. Two hours per week.

Mathematics.—Algebra: Review of the four fundamental operations with common integers; greatest common divisor; least common multiple; common fractions; the four fundamental operations in the same. Decimal numbers; decimal fractions; changing common fractions into decimal fractions and *vice versa*.

Powers and roots: surd, imaginary and complex numbers, and the four fundamental operations in the same. Equations of the first degree containing one and more than one unknown quantity; exercises in the formation of such equations. Exercises in diophantine analysis; rules of alligation. Theory of geometrical proportions: rule of division. Theory of quadratic equations with one unknown quantity; solution of the same. Exercises in the formation of such equations with two unknown quantities whose eliminating equation can be traced back to a quadratic equation.

Geometry.—The fundamental principles and most important propositions of planimetry, paying especial attention to the study of surface measurements. The fundamental principles and most important propositions of stereometry. Solid bodies, computing the surfaces of the same. Every two weeks tasks set for home work, and every four weeks tasks set for school work. Four hours per week.

Commercial Arithmetic.—Review of the short methods of multiplication and division. The most important abbreviated methods of calculation. The measures and weights used in the most important countries, especially the metric system of weights and measures. Rule of proportion; chain rule; percentage and its application (insurance, commission, brokerage); simple interest, discount and their applications; interest on accounts current in its different methods.

Commercial Knowledge and Accounting Room Work.—The theoretical part embraces the rules of commerce in general and its branches; the trades directly connected with commerce and its auxiliary institutions; the objects of commerce and their classification according to customary usage; the most important facts relating to weights and measures, as well as the science of money and exchange; finally, the position of merchants in relation to one another as well as to society.

The practical part is devoted to the methods of preparing notes, accounts, invoices, bills of sale, bills of cost, announcements of receipt of goods, exchange, accounts-current, etc.; finally the different methods of bookkeeping with errors in quantity, which are applied exclusively in a business period of one month. Three hours per week.

PHYSICS.—Introduction, general characteristics, forces and laws. Heat: essence of the same and its sources; the three principal modes of diffusion of heat and their application. *Magnetism.*—Explanation and fundamental phenomena; earth magnetism; production of magnets, their strength and application. *Electricity* and effects of accumulated electricity; origin of the electrical current; cables and batteries; strength of the electrical current and effects of the same. Principal phenomena of thermo-electricity, thermo-electrical columns, and their use. *Acoustics:* origin of sound, forms of the same; tone, musical note, pitch of tone, the musical scale, temperament, most important sound-producers, resonance, loudness of a sound, transmission of sound. *Mechanics.*—(*a*) Laws of equilibrium; centre of gravity; modes of rest; active and passive resistance; simple machines and their uses. Laws of motion, of percussion, of freely falling bodies, of projectiles, of pendulums; centre of motion. (*b*) Fundamental characteristics of liquids; laws of equal transmission of pressure, of pressure on the bottom and side-pressure; of communication and its use. Law of Archimedes; laws of the rapidity of discharge and quantity discharged. (*c*) Fundamental characteristics of gases; atmospheric pressure and its uses; Mariotte's laws; diffusion; absorption; endosmosis of gases; motion of gases and its use.

Natural History.—Natural history of the three kingdoms, with special attention to such portions as are necessary to enable one to recognize and test the raw material of the world's commerce. Two hours per week.

Penmanship.—German, English and French handwriting. Two hours per week.

Second Year's Course in the Academy.

German.—The study of the forms of poetry in connection with the selections for reading. Most important works of German literature up to Gottsched's death. Practice in reading and speaking. Every three weeks a written composition composed alternately at home and school. Two hours per week.

French.—The most important rules of syntax, together with the oral and written exercises belonging thereto. Readings, explanations and memorizing business letters. Easy compositions and business letters, modeled after the previously explained selections. Increasing the stock of phrases and the vocabulary. Every three weeks set tasks assigned to be done alternately at home and at school. Three hours per week.

English or Italian.—Review and a further study of the etymology; thorough treatment of syntax, together with the oral and written exercises belonging thereto. Readings in narrative, descriptive and epistolary prose, this last with special attention to a business style. Instruction introductory to the composition of simple business letters. Increase of the stock of phrases and words. Practice in talking. Work assigned to be done alternately at home and school every three weeks. Three hours per week.

Commercial Geography.—Commercial geography of Holland, the three Scandinavian kingdoms, England, Belgium, France, Spain, Portugal, Italy (including their colonies). Details as in the first year. Three hours per week.

History.—History of the Middle Ages since Charlemagne, and modern history to the Peace of Westphalia, with history in detail of Austro-Hungary. Two hours per week.

Mathematics.—Algebra: Logarithms, use of logarithmic tables, solution of simple exponential equations. Arithmetical and geometrical progression.

Geometry.—Computation of the contents of solids. Every two weeks a task assigned to be done at home; every four weeks a similar task assigned to be done at school. Three hours per week.

Commercial Arithmetic.—Computation of gold, silver and coin; computation of exchange according to Vienna custom; computation of stocks, bonds, etc., according to the manner of the different countries, giving special attention to those cities which quote Austro-Hungarian paper. Three hours per week.

Bookkeeping.—Instruction as to the manner of making out different bookkeeping forms, showing mistakes as to quantity and value. Booking of business transactions, mercantile, bank and commission business, covering a period of several months. These are booked according to the different methods, and all letters and counting-room memoranda are carefully studied. Four hours per week.

Correspondence.—Letters relating to mercantile, consignment and commission business; letters relating to insurance and forwarding affairs, making over notes, attachments, descriptions of goods, price-current, market and weekly reports. Letters relating to exchange, drawing bills of exchange on one's own and another's account, transmitting drafts for acceptance, disposition of bills payable, remittances of money and bills, process of protesting, collateral acceptance, account of re-exchanges, commission business in notes, bills, etc., lost bill of exchange, bills of exchange and sending coin, payments, bank-note, treasury bill, notes on mortgage banks, checks, abatements, transfers; letters relating to partnership and bank business; letters of inquiry, of notice and dunning letters; circular letters; letters of credit, written offers, advertisements, contracts, power of attorney; letters on affairs in law and bankruptcy. Two hours per week.

LAWS RELATING TO BILL TRANSACTIONS AND TO COMMERCE.

I. Laws Relating to Bills of Exchange.

a. Introduction: Technical side of banking and exchange; explanation of technical expressions; sketch of the history of exchange, and of the laws relating thereto.

b. Code Relating to Bills of Exchange: The right to sign bills of exchange; drawn bills of exchange (drafts); requirements for the same; duty of the drawer; endorsement; presentation for acceptance; acceptance; claims against the security; discharging a bill obligation; recourse in case of non-payment; honor acceptance (collateral acceptance); duplicate bills; copies of bills; mislaid bills; counterfeit bills; prescription of bills; right to bring action on part of the creditor; requirements of protest; time and place for the various transactions in commercial bills, insufficient signatures; relation to foreign laws; bills drawn on one's self. Special care is taken to illustrate the existing laws relating to bills of exchange by means of practical cases taken from every-day commerce.

c. Regulations Relating to Stamping Bills.

d. Fundamental laws of legal processes concerning bills of exchange. Difference between the recent Hungarian and Austrian laws relating to bills of exchange.

II. Commercial Law.

Introduction: The necessary elementary economical ideas, especially the concept of property, economy, commerce, products, merchant, history of the commercial law of Austria, the origin of a common German commercial code. Commercial code. Facts pertaining to the profession of merchants; what constitutes a merchant, and the branches into which merchants are divided; commercial register; commercial records; authorized agents and managers; assistants; brokers. Two hours per week.

Chemistry.—First semester, Inorganic Chemistry; second semester, Organic Chemistry. General view of the most important elements and their combinations, devoting as little time as possible to the purely theoretical, but giving special attention to those elements and their combinations, which have an extensive application in practical life. Three hours per week.

Practical Exercises in the Chemical Laboratory.—The participants in these exercises are instructed in qualitative chemical analysis during the first year; in the second year quantitative analysis (atomic weights and measures). The aim of the first year's instruction is to secure exactness in the qualitative analysis of the most important minerals and inorganic commercial products.

Study of Commercial Products.—Introduction. Classification.

a. Inorganic (mineral), products. Gems, material for sculptors, carvers (meerschaum), grinders and polishers. Fuels from fossilized matter and similar products (Phytogeny), metallic products produced mechanically.

b. Organic products. Explanation of the methods of investigation. Microscopy; vegetable material; organic (possessing structure). Entire plants and their parts, as leaves, tops, flowers, fruit and seeds (starch, dextrin, sugar, woods); bark, fibre (spun fabrics, woven fabrics, paper); paying attention to their use as foods, drinks, spices, coloring matter, and matter containing tanning material or other material used in the arts. Two hours per week.

Third Year's Course of the Academy.

German.—Readings and explanations of certain selections from the principal poetical and prose works of our classical and modern poets in connection with literary and biographical sketches. Exercises in delivery. Once in four weeks a written composition. Two hours per week.

French.—Extending and supplementing the syntactical knowledge. Brief review of the entire grammar, partly in the French language. Readings from the best specimens of French prose and poetry, with statement of contents and explanations in French. Memorizing model business letters and reading selections. Composition of business letters and comparatively long, independent essays. Every three weeks alternate home and school tasks are assigned. Three hours per week.

English or Italian.—Brief review of the entire grammar, partly in English (or Italian). Readings from standard selections of prose and poetry, with statement of contents and explanations in English (or Italian). Memorizing of business letters and certain model literary selections. Practice in writing business letters and independent compositions. Alternate home and school tasks every three weeks. Three hours per week.

Commercial Geography and Statistics.—Commercial geography of Turkey and the Levant, of Russia, of the United States of America, of Mexico, of Brazil, of the States of the La Plata, of Chili, of China and Japan. (Details as in the first year's course.)

Geographical statistical survey of the world's commerce and its principal routes at the present time. Two hours per week.

General and Commercial History.—History of the European countries from 1648 to the present. Commercial history from the earliest times to the present. Two hours per week.

Commercial Arithmetic.—Computation of commercial paper of the most important European and transmarine centres of commerce, arbitration, bills of exchange, stocks, etc. Review of the entire subject. Three hours per week.

Political Arithmetic.—Compound interest and computation of incomes from funded property. Introduction to the calculation of loans; construction of sinking-fund plans; lottery loans; the elements of the computation of probabilities; computation of life annuities, and claims on estates in expectancy. Income from life insurance (widows' pensions); insurance of capital. Two hours per week.

Knowledge of International Commerce.—The Produce Exchanges, their origin, divisions and organization; produce broker; legitimate exchange business and the exchange boards of arbitration. The systems of weights and measures used in international commerce and trade; the laws regulating the system of weights and measures; the metric, English, Russian and Chinese systems of weights and measures, and their position in the world's commerce. Condition of weights and measures in the Orient. Measure of quality used in the international grain trade; measure of quality used in the international yarn and silk trade (yarn numbering and silk titration); determination of quantity in the spirit trade; units of measurements; the condition of money standard, and the quotation of bills of exchange and currency quotations of the most important transmarine cities.

FORWARDING GOODS IN INTERNATIONAL TRADE.

a. Railways and River Boats.—The rules of management; railroad rates; method of fixing the tariff on goods; classification of goods in Austro-Hungary, Germany and France; international alliances; international service and the various papers relating thereto.

b. Sea Navigation.—Registration; measuring and classification of merchant vessels; the manifest book and bill of lading; the consignment; the charter party; tonnage of ships; fixing tariffs on goods; the steamship societies which are important for Austro-Hungary, their lines and tariffs; the most important facts relating to mercantile insurance.

Ordinary conditions of sale; price quotations of the most important articles in international trade, namely: grain, flour, oil-grain (linseed), spirits, petroleum, cotton, coffee and sugar. Explanation and computation of equivalent prices on the basis of the quotations on the world's market, and the construction of tables of equivalent prices. Deductions on exports and imports, illustrated by a series of examples taken from actual practice.

Accounting and Correspondence (*Model Counting Room*).—Complete execution of a set of books in mercantile, commission, forwarding, manufacturing and banking business. Bookkeeping in stock companies, together with all necessary vouchers; comparative bookkeeping especially in respect to mistakes in quantity and value. Five hours per week.

Laws Relating to Commerce and Industry.—Continuation of commercial law, partnerships in commercial law, the study of partnerships (open commercial partnerships, limited partnerships, limited joint stock companies, stock companies, limited liability partnerships, joint partnerships). The theory of mercantile trade and at the same time a discussion of the fundamental principles of civil rights, especially the rules for winding up a business and for settling commercial transactions; of giving securities, especially a mortgage or lien. Further, the study of indorsable paper; purchasing; commission; forwarding and freight business (the last, in general, but specially with respect to railways).

2. The Regulation, relating to trade, of Dec. 10, 1859, together with all additions. Law relating to charters; law protecting trade-marks and patents; law relating to peddlers; laws relating to chambers of commerce, also mercantile agents; law concerning industrial and co-operative societies; laws and regulations concerning dealing in promissory notes; and warehouse laws.

3. General rules relating to insolvency proceedings, and especially the theory of mercantile insolvency and compulsory settlement voted by a majority of creditors. Two hours per week.

Political Economy.—History of the systems of political economy. Importance of the same and explanation of their fundamental principles.

The production of wealth:

a. In general;

b. Factors in production (nature, labor, capital);

c. Co-operation of the factors in production.

The distribution of wealth:

a. Inequality of the distribution (socialism, communism);

b. Income and its sources (rent, wages, interest).

Circulation of wealth:

a. In general (Exchange value and price);
b. Money, the money standard;
c. Credit and its aids (bills, checks, money-orders, paper money); different kinds of banks, clearing-houses;
d. Means of transportation.

Consumption of wealth. Luxury. Influence of government on the national economy:

a. Means for furthering production in general, the question of associations;
b. Various forms of production; mining, smelting, agriculture, tree culture, manufacturing, factory laws, commerce, railroad and custom questions;
c. Population and care of the poor;
d. Taxes and national debt, especially the theory and history of financial crises. Three hours per week.

STUDY OF PRODUCTS.

I. Vegetable substances (without structure); gum, rosins, balsams, volatile oils, fats, waxes, vegetable milk and extracts.

II. Animal substances: whole animals; milk and its products; hide and its parts (leather, hair [as animal covering] in comparison with silk, articles spun and woven from hair, wool, etc., feathers, scales, horn, tortoise shell, whalebone); bones, (glue in comparison with isinglass); tusks, (ivory tusks of the walrus, hippopotamus and narwhal); fat and its products, (soap); the substances produced and secreted in the animal body or substances out of which other products are made (musk, ambergris, castoreum, civet, silk, wax, guano, honey); pearls and mother-of-pearl, corals, sponges.

The material above sketched is treated on a strictly scientific basis, having regard to the practical use to be made of the knowledge thus acquired, and the characteristics of the most important objects in the world's commerce and in local trade are discussed in a comparative manner by inspection of the natural products, by the aid of table work, and microscopical preparations. Two hours per week.

C. PREPARATORY CLASS.

In order to make it possible for those pupils to attend the academy who have not taken the studies required for entrance to the three-years' course, the Imperial Ministry for Religion and Instruction has permitted a preparatory class to be organized in connection with the Commercial Academy, which has, however, the character of a private course. According to the decree of the Imperial Ministry for Religion and Instruction of July, 1877 (Z. 10194), every pupil who has passed his thirteenth birthday may be admitted to this preparatory class, if the managers of the Commercial Academy find him to be properly qualified.

The pupils of the preparatory class receive no certificate, but at the close of the second semester they must pass the examination required for entrance to the first year's course of the Commercial Academy. The pupils receive from the managers of the academy a statement of the result of this examination.

ROSTER.	Hours per Week.
German	5
French	4
Geography	3
History	3
Common and Special Arithmetic	5
Physics	3
Natural History	3
Penmanship	2
Total	28

DISTRIBUTION OF THE SUBJECTS OF INSTRUCTION.

German.—Recapitulation of the grammar (inflection, parts of speech, formation of words, syntax); orthography and punctuation. Compositions on the most important events at school and on a future career; theory of style. Exercises in reading and declamation; grammatical and exegetical explanation of the selections read. Every two weeks a school task is assigned, and every three weeks a home task. Discussion and criticism of the latter. Five hours a week.

French.—Elementary grammar. Dictations and readings. Acquiring of an adequate stock of words and phrases. Home and school tasks alternating every two weeks. Four hours per week.

Geography.—Main features of general geography of the five continents, based on a careful study of the maps. Three hours per week.

History.—First semester. Sketches from the history of their own country from its beginning to the close of the Wars of Independence. Second semester. Narrations from the life of the people of ancient times, with special reference to the legendary history of the Greeks. Three hours per week.

Mathematics.—Particular arithmetic. Explanation of the decimal system of numbers. The four fundamental operations in integers and decimal fractions, with the use of practical applications of short methods. Short methods of multiplication and division. Divisibility of numbers; greatest common divisor; least common multiple; common fractions; and computation with the same. Geometrical relations and proportions, and their applications to problems of practical life. Chainrule. Algebra. The idea of common numbers, and their relation to one another. Positive and negative numbers. The four fundamental operations with universal, whole and fractional numbers. Equations of the first degree having one unknown quantity. Every two weeks a home task; every four weeks a school task. Five hours per week.

Physics.—Introduction. Resultant of several forces. Cohesion. Electricity. Magnetism. Acoustics. Statics and dynamics of solids, liquids and gases. Optics. Three hours per week.

Natural History.—General natural history of the three kingdoms. Three hours per week.

Penmanship.—The ordinary German and English hand. Two hours per week.

We turn now to the collections of the academy, and to those institutes which were established in order to supplement the theoretical instruction by practical exercises and thus to render more easy the passage of the pupils of the school into practical life.

a. Collection of Coins.

This collection was begun upon the initiative of the present director and contains all the current coins, domestic and foreign, arranged by States. It is a great aid to instruction in mercantile subjects.

b. Physical Laboratory.

Instruction in physics is given in a special room assigned for this purpose. The apparatus belonging to the physical laboratory has cost, up to the present, over 6000 florins, and includes the most necessary instruments for purposes of experimentation and illustration.

c. Chemical Laboratory.

Chemistry and the knowledge of commercial products open to the pupils an understanding of the technico-commercial branches. On this account great emphasis has been laid on this study from the beginning of the academy, owing to its relation to the manufacturing classes. The chemical laboratory has been several times enlarged, and includes not only lecture rooms, but also several working rooms which have all the equipment necessary for accurate organic analyses. The laboratory has a large special library and a rich collection of preparations and apparatus which are used for illustration in the lectures. It not only affords the pupils means for practical work, but also an opportunity to the director of the laboratory for original investigation in every direction. The practical exercises are attended yearly by from twenty to twenty-five pupils.

The origin of the collection of commercial products dates from the first years of the academy. There was also a natural history collection corresponding to the wants of the preparatory classes of that period. Both collections were annually increased, but remained entirely separate until instruction in these two departments was entrusted to the same professor, when the collections were united. The instruction in commercial products was greatly expanded by the introduction of practical exercises. These exercises are attended by pupils of all three classes and of the graduate course also. They take place in a special laboratory for the testing of commercial products, which is well equipped with the necessary apparatus, including microscopes, saccharometres, etc.

The combined collections for natural history and commercial products are divided into three groups: the collections for instruction in natural history and commercial products; second, the collection for practical work in the commercial product laboratory (reports are made each year from these practical exercises), and third, the museum of products.

This museum was begun at the initiative of the present director in the year 1885. It is located in the large hall, second story front, and in the room immediately connected with it. The museum has a double purpose: to aid instruction in commercial products in the academy, and to promote a general knowledge of such products in the public at large. The collection is, therefore, open not only to pupils, but also to the general public. The specialty of this museum is the collection of adulterations of products, and it is not impossible that a considerable influence may be exercised from this laboratory upon the trade in adulterated products. The museum of products embraces about 4000 numbers and thirty groups. For the completion of the same the Administrative Council has given 1000 florins a year for the past three years.

It is also to be noted that in the program of instruction in the knowledge of commercial products belongs a system of visits to collections and

factories, which the pupils make under the guidance of instructors. All the pupils of the academy take part in those excursions which occur in Vienna, but in the long trip which is made each year at Easter time, and which extended in 1887 to Strasbourg, a limited number of pupils only can be included.

d. Geographical Cabinet.

This cabinet is one of the most comprehensive in this special department. It includes 170 wall maps, and a large collection of casts and representations of geographical and ethnographical objects.

e. Collection to Illustrate the History of Art.

This collection has just been begun; its function is to supplement instruction in history and the history of literature, in order to compensate as far as possible for the rather meagre number of hours assigned to these subjects in the program.

f. Library.

The collection of books at the Vienna Commercial Academy embraced, at the close of the school year 1886–87, 5298 volumes. It is divided into two divisions, the professional library for the pupils, and the general library. The latter includes important collections used as reference libraries in the individual departments of instruction. The professional library for pupils was established in order to give them the necessary aids for further study, and for the essays which they must prepare. All works of merely amusing or entertaining character are excluded from this collection.

The Traveling Scholarship Fund.

The intermediate school has completed its function at the time when it gives the graduate his final certificate. But the professional school cannot avoid extending its work beyond this period, and serving as an organ of communication between the young men who have completed its curriculum and those people who desire young men with such training. In this respect the Vienna Commercial Academy has from the beginning done everything it could, and it has been in the happy situation of being able to secure for its graduates good positions not only at home, but also abroad. This last circumstance is of great importance to the foreign commerce of our country. Ever since the days of Maria Theresa complaints have been made continually that the monarchy has had very few national commercial houses in foreign countries, and yet these are the chief means of enlarging the economic territory of the State. To obtain these, however, it is absolutely necessary that the citizens of the country enter business in foreign ports, and thus learn to know foreign countries thoroughly. Now there are probably many young men who possess the necessary training, but oftentimes they are not in the place where they are most necessary, and still oftener are not in a social position to learn commercial centres in every detail and to exercise an active influence in favor of the national trade.

In order to assist young merchants, who have had a certain practical experience, to make a careful study of foreign centres of trade, the present director of the academy proposed in a general assembly of the association of the Vienna Commercial Academy, held on December 8, 1885, the establishment of a special traveling scholarship fund. This proposition was received with warm approval. His Majesty, the

Emperor, gave the first subscription of 5000 florins to this fund. His example was followed by Prince John, of Liechtenstein, and a number of prominent merchants and manufacturers and various commercial institutes. The director succeeded in raising for this purpose the sum of 60,000 florins. The list of the various subscribers and the regulations for the scholarships are to be found in the report of the proceedings of the Administrative Council, made December 12, 1886. In April, 1887, the Administrative Council decided to assign two scholarships of the value of 1500 florins each; one to Salonichi and one for Barcelona. In September, 1887, both were assigned. The conditions of these scholarships are: completion of the Vienna Commercial Academy with distinction, and at least three years successful practical work at home and abroad.

It remains now, in order to complete this account, to give some of the more important data relating to the school. The total attendance at the Vienna Commercial Academy, since its establishment in 1858 to the year 1888, inclusive, was 16,906 students. It is of interest to note how many students have completed the course of study and obtained the certificate of graduation. It appears that in the first period, 1858 to 1872, there were 1714 graduates; second period, 1873 to 1877, there were 1262 graduates; third period, 1878 to 1888, there were 2168 graduates, making a total of 5144 in the thirty years of the life of the academy. The success of the instruction has been a very satisfactory one, and in this connection it is important to note that the report of the management to the Ministry of Education, rendered each year since the beginning of the third period, has been uniformly accepted as eminently satisfactory.

The graduates of the academy have always found employment very quickly, whether at home or abroad. Former students of the academy are to be found in all the larger centres of trade in Germany, Switzerland, France, England and Belgium, as well as in the leading States of North and South America. At the present time there are forty foundations or scholarships established by the founders, in accordance with the provision noted above. There is one Imperial scholarship of a yearly value of 300 florins, and two scholarships named after Czedik of 126 florins each. The Assistance Fund, established for worthy poor students, amounted on the fifteenth of June, 1887, to 7,061.73 florins, and aid was granted in the school year 1887; in cash, to the extent of 683.11 florins; in paper, pencils, etc., to the extent of 246 florins; in textbooks, to the extent of 290.63 florins; in traveling expenses, to the extent of 370 florins. The students contributed to this fund 920.25 florins. The president of the society for assisting poor students, which has charge of the fund, is the director of the academy, *ex officio*. The Executive Committee consists of two professors, chosen by the instructing body and a general committee of two from each division chosen by the students.

The association of the Vienna Commercial Academy had received, from its foundation up to 1887, from its members contributions to the amount of 530,642.22 florins; of this amount the State granted 40,950 florins, the city of Vienna 31,500 florins. The State made its appropriation in the form of establishing, through the Ministry of Religion and Instruction and the Ministry of Finance, one scholarship (3150 florins) a year, for a series of years. In consequence, the Ministry for Religion and Instruction controls at present seven scholarships, and the Ministry of Finance six.

Of this amount, 452,110.15 florins were used for the purchase of the ground and the erection of the building of the academy, and to cover the deficit of the early years, including also 27,000 florins assigned to the pension fund established in 1873. The rest of the sum constitutes the academy fund, which, according to the balance of the thirty-first of August, 1886, amounted to 159,693.80 florins.*

The current expenses of the academy since its establishment amount to nearly two million florins and was covered entirely by the tuition of pupils. The income of the institution from tuition and incidental fees from 1878 to 1887 amounted to nearly 900,000 florins.

The Administrative Council of the Vienna Commercial Academy has, however, uniformly observed the principle that the worthy pupil, though poor, should be enabled to attend this school. It grants, therefore, every school year to a considerable number of pupils either entire or partial remission of tuition. These remissions represented down to the thirty-first of August, 1887, the considerable sum of 280,485 florins.

The preliminary budget for the year 1886 showed the following estimate:

	Florins.
Salaries	58,985
Administration	6,000
General expenses	13,200
Pension	4,145
Incidentals	3,950
Total	87,280

The Vienna Commercial Academy possesses, since 1873, its own pension fund, which is managed by a separate committee. To this fund the regularly appointed professors contribute the same rates as in the case of public educational institutions, as the provisions adopted by the State for similar pensions have been accepted as the rule for this fund. Besides this, the General Assembly grants yearly a very considerable sum to this fund from its surplus income. On the thirty-first of August, 1886, this fund amounted to 144,314.46 florins, and the pensions payable amounted to 4074.96 florins. In the General Assembly of December 12, 1886, 5000 florins were granted to this fund.

The Vienna Commercial Academy is located in its own building, which was formally opened on the twelfth of October, 1862. It embraces an area of 1953 square metres. Its principal front is sixty metres long; its two side fronts thirty-one metres each. The building is two stories high. It cost, as noted above, 452,110.15 florins. As divided at present, it embraces fifteen lecture rooms, the museum of commercial products, the laboratories for chemistry and commercial products, the physical, geographical and natural history halls, two libraries, two faculty rooms, the office of the management and various small offices, and the residence of the director and three servants, and has accommodation for 800 students. The arrangements for heat are so fixed that the vestibules, the great stairway and the large corridors are warmed throughout. Water is also furnished throughout the building. The heating costs per year from 1400 to 1500 florins; gas from 1600 to 1700 florins.

We might finally mention that the Vienna Commercial Academy has the largest attendance of similar commercial schools in Austria, Germany

* The thirtieth of September, 1877, at the beginning of the third period, there was still a mortgage upon the academy building of 15,000 florins, and no cash fund.

and France, and that of late years the management has been repeatedly requested to give detailed information to foreign governments as to the arrangements and organization of this school. The school also received the highest distinction at the Vienna World's Fair in the year 1873.

LATER STATISTICS.

Certain facts relating to the attendance at the various courses will undoubtedly be of interest in this connection.

The one-year course for graduates of the gymnasia and real schools had an enrollment in 1889 of 115 pupils, 1890 of 105 pupils, 1891 of 115 pupils.

Of these there were:

	Catholics.	Protestants.	Greeks.	Jews.	Total.
In 1889	47	12	6	50	115
In 1890	44	10	2	49	105
In 1891	39	13	7	56	115

AGE OF STUDENTS.

Age.	1889.	1890.	1891.
16	—	—	1
17	—	—	19
18	10	12	30
19	17	19	15
20	34	27	17
21	24	11	13
22	10	13	10
23	8	6	3
24	4	4	—
25 and over	8	13	7

Students came from all the leading provinces of Austria and eleven of them from foreign countries.

In 1889, seventy-three of the students were Germans, twenty-two of the students were Poles, eleven of the students were Hungarians, and the others of various other nationalities. The other two years do not show any considerable variation from this year.

It will be noted that the large majority of the students were in these years over eighteen and in the first two years over half were over twenty.

THREE-YEAR COURSE IN THE ACADEMY.

Number in classes:

	First Class.	Second Class.	Third Class.	Total.
1889	275	210	176	661
1890	264	225	182	671
1891	230	220	188	638

In 1889 there were 661 pupils on the rolls at the end of the year; in 1890 there were 671 pupils on the rolls at the end of the year; in 1891 there were 638 pupils on the rolls at the end of the year.

Ot these there were—

	Catholics.	Protestants.	Greeks.	Jews.	Unclassed.
In 1889	310	30	10	311	1
In 1890	305	33	17	315	
In 1891	283	43	11	301	

Age	1889.	1890.	1891.
14	24	20	11
15	116	112	78
16	161	183	187
17	178	178	171
18	116	120	130
19	47	50	45
20	15	5	14
21	3	3	2
22	1	—	—

During these three years only one student succeeded in reaching the third year of the course at an age less than sixteen; and only one student had succeeded in reaching the second-year's course at an age less than fifteen. Only one-fifth of the students in the academy in 1889 were under sixteen years of age; about the same ratio held for 1890, and in 1891 less than one-seventh were under sixteen. The average age of the pupils appears then to be from sixteen to nineteen.

The association for aiding indigent and worthy students seems to do very real service.

In 1889 it granted 922 florins in cash to various students; 270 florins in supplies; 218 florins in books; 500 florins in traveling expenses.

The association granted in 1890 to various students, 898 florins in cash; 302 florins in supplies; 117 florins in books; 400 florins in traveling expenses.

The association granted in 1891 to various students, 1041 florins in cash; 270 florins in supplies; 119 florins in books; 502 florins in traveling expenses.

FACULTY.

Director:	Subjects:
Dr. Rudolf Sonndorfer	Political Arithmetic and International Trade.
Professors:	
Heinrich Binn	Mercantile Arithmetic, International Trade and Office Work.
Eduard Bittner	Commercial Arithmetic, International Trade and Office Work.
Dr. Max Borowsky	Physics.
Dr. Theodor Cicalek	German, Commercial Geography and Statistics.
Karl Engelhard	Stenography.
Dr. Otto Franckel	Commercial Law.
Eduard Hanausek	Study of Products, Natural History.
Johann Hann	Mathematics, Political Arithmetic.
Dr. Karl Hassack	Natural History.
Paul Hertzog	French.
Charles Hurt	English.
Rudolf Kathrein	Mercantile Arithmetic.
Anton Kleibel	Bookkeeping and Correspondence.
Dr. Richard Mayr	German and History.
Dr. jur Robert Meyer	Political Economy.
Dr. Karl Rausch	German and History.
Camillo Sandré	French.
Rudolf Schiller	Mercantile Arithmetic and Bookkeeping.
Adrian Schuster	Bookkeeping and Correspondence.
Nicolaus Teclu	Chemistry.
Dr. Theodor Theumann	Commercial Law.
Dr. Philipp Zamboni	Italian.
Dr. Karl Zehden	Commercial Geography and Statistics.
Instructors:	
Dr. Thomas Fr. Hanausek	Study of Products.
Karl Hessler	Insurance.
Franz Holzer	Insurance Tariff.
Assistants:	
Leopold Bageard	French.
Dr. Julius Dostal	German.
Florence Henry Hedley	English.
Dr. Georg Karschulin	German and Commercial Geography.
Julius Melnitzky	Penmanship.
Karl Müller	Mathematics.
Dr. Julius Ritter Roschmann von Hörburg	Political Economy.

Sub-Assistants:	Subjects:
Heinrich Eisenkolb	Commercial Subjects.
Karl Kunczitzky	Stenography.

Making a total of one director, twenty-three professors, three instructors, seven assistants, two sub-assistants; total thirty-six.

2. COMMERCIAL ACADEMY OF PRAGUE.

*The Foundation of the Institution.**—It is a strange fact that the very class which occupies to-day by its activity and wealth the most prominent place in our society, has been neglected almost altogether by the governments of the various States in regard to the professional training of its members. There are gymnasia for the training of the future scholar and public official, and Real schools and polytechnic institutions for the technologist. The forester, the miner, the soldier, the sailor, all have their own technical schools, but the future merchant has had to content himself with the gymnasium or the Real school. Was the reason for this to be found in the fact that the merchant needs no special preliminary training for his calling? That the special branches of knowledge appropriate to his vocation are really only facilities which the school is not able to give him; things of subordinate importance which he can easily acquire for himself by private activity and practical work? It would almost seem so, and it may be that this view was not unjustifiable in earlier times, but the present makes new demands upon the merchant if he wishes to rise above the limited sphere of the small shopkeeper. He needs a greater amount of training and knowledge if he is to keep pace with the times, and to occupy that place in social and economic life to which he is entitled. But where shall he obtain this training?

There is no doubt that existing educational institutions are not adequate to supply this want. The solid training of the gymnasium has its great advantages, and many a merchant of to-day selects his assistants rather from the ranks of the graduates of the gymnasium than from those of the real schools. But the gymnasium cannot, of course, insert the purely commercial branches of instruction into its curriculum, and, consequently, it does not appear to be at all satisfactory as a special preparatory school for the commercial career. The real schools would seem to be somewhat nearer, but these schools furnish a training more suitable for the manufacturer and the technologist than for the merchant, and until very lately, especially in Austria, they excluded from these schools the important element of modern languages. The purely commercial branches also are either very inadequately, or are not at all represented in their curriculum. The attempt has been made here and there to unite special commercial courses with the real schools. But this is only piecework, and can be justified only where it is impossible to establish independent commercial schools. For the place of the professional school cannot be even approximately supplied in this way.

At the time when the thought of the establishment of the commercial school appeared for the first time in Prague, the various public educational institutions were far less perfect than to-day. The unsatisfactory condition of things had been recognized first in Germany, and it was the Leipzig Merchant Guild which took the first step toward the remedy. It established in the year 1831 a commercial institute, whose organization

* cp. *Die Prager Handelsakademie von ihrer Gründung bis zur Gegenwart (1856-1873) Gedenkschrift aus Anlass der wiener Weltausstellung.* p. 4 and following.

by Schiebe remained for a long time in a certain sense the model for the similar establishments organized later throughout central Germany.

About the same time the need for a special commercial school was felt in Prague. Mr. Johann Bachheibl, a member of the Commercial Council from 1831 to 1840, was the first to take up the matter, and to urge upon his colleagues the desirability of such an establishment. But many hindrances, especially the unfavorable conditions of the time, prevented them from carrying out the idea. It was not until the year 1849 that the first real step toward such an institution was taken.

The president of the Commercial Council in that year, Mr. Josef Halla, and a member of the corporation, Mr. Edward Pleschner, took up the idea with energy, for the need of such an institution was more and more keenly felt every day. The Commercial Council appointed a committee to obtain the necessary financial means, and in March, 1849, the committee published the following address to the merchants of Bohemia:

"The establishment of a commercial school in the capital city of Bohemia, a land where such a many-sided industry and trade flourish, has been a long felt want. But it was not possible, under previous conditions, to establish this institute so necessary and advantageous for our youth. It remains further our honorable task by uniting all the necessary intelligent and pecuniary means to establish and develop a commercial institute. It appears superfluous to dwell upon the advantage of such an institution. Every one of us recognizes how necessary to our prosperity is the regular and systematic training of our youth. We have been obliged up to the present to seek such a training for our sons in foreign countries, at the cost of much money and great anxiety. In the future we should find this at home. We all recognize, moreover, how greatly such a theoretical course would aid our young people when they go into practical life, and how much more useful they are to us when they have enjoyed the training of such an institution. The Commercial Council, inspired with this conviction, has, therefore, resolved to establish such an institution. It proposes to cover the expenses in part by the use of its own capital, and in part by the contributions of founding and contributing members. We send, therefore, an earnest invitation to all members of the commercial and manufacturing classes of Bohemia to assist in the establishment of this useful institution, and by co-operative effort to leave this honorable memorial to our posterity. The Commercial Council has appointed a committee, which is not only to take charge of the new school, but to work out a curriculum upon the plan of the best existing commercial schools. The council has resolved further to make provision so that the apprentices in our shops, who are not able to enter the school regularly, may obtain instruction in the practical knowledge relating to commerce from the teachers in this institute. In this arrangement we rely upon the humanity of our colleagues to assist us by sending regularly their apprentices, and prove in this way that they, as well as we, desire the training of useful and skillful clerks, and that in this way the value of this sort of instruction may be fully recognized."

In answer to this invitation 12,000 florins were subscribed within a short time. As this sum, however, was not sufficient for the establishment of a higher commercial institute, the council resolved to organize a Sunday-school for commercial branches. Steps were immediately taken to carry this resolution into effect. The school was opened on the nine-

teenth of April, 1850, on the birthday of the emperor. Rooms were obtained for it in the Polytechnic Institute.

This Sunday-school, however, was intended only as a transition institute to the higher commercial school which was the end and aim of the efforts of the council. The year 1851 brought a decisive turn in favor of the establishment of such an institution. In that year a man was chosen as presiding officer of the Commercial Council who possessed in himself all the qualities which were necessary to secure the realization of the plan above mentioned.

Mr. Edward Pleschner, the new president, devoted his attention in the first place to increasing the endowment fund, and to overcoming the prejudices and objections against the project, which showed themselves here and there. His efforts were soon crowned with success. The fund was increased by June, 1853, to 34,398 florins; by the year 1855 the fund had reached 44,211 florins. The necessary financial means had thus been provided for.

There were many different views as to the manner in which the project should be carried out. Some favored the acquisition of a separate school building and the union of the Sunday-school with the proposed academy. Others proposed that the Sunday-school for commercial branches should be expanded so that instruction should be given on one week-day, and that this should be gradually extended by the addition of new subjects of instruction. A third party, under the lead of the president, wished to establish an independent higher commercial school, and this view was finally adopted. On the eighteenth of October a final decision was made, and the Commercial Council unanimously voted for the establishment of the independent commercial institute.

The next effort of the council was devoted to the acquisition of a building, which was purchased shortly after for the sum of 58,542 florins. On the thirteenth of December, 1855, the council held its first meeting in the halls of the school.

On the third of October preceding, the council had presented a petition to Count Leo Luhn, Minister of Religion and Education, in which they expressed the conviction that the commercial classes, on account of the important position which they occupied from an economic and social point of view among the other classes in society, needed not only thorough professional knowledge, but also a higher general training, and asked that the minister might permit the Commercial Council to establish within the walls of Prague a new kind of institute, the like of which had not yet been established in Austria.

The proposed curriculum included in the memorial embraced the following subjects:

1 German language and literature.
2 French, English and Italian.
3 Mathematics and commercial arithmetic.
4 Commercial and maritime law, and the law relating to promissory notes.
5 Political economy.
6 Geography, history and statistics.
7 Natural history and physics.
8 Chemistry.
9 Drawing and penmanship.
10 Practical bookkeeping and correspondence.

In order that, as the memorial states, the pupil may be ready immediately upon leaving the academy to enter practical commercial work.

Until the permission of the government was obtained, the committee occupied itself with the necessary preparations. It issued a circular letter to business men and manufacturers of Bohemia, in which it requested the donation of suitable material for the museums and other collections. From all parts of the country specimens of raw materials and manufactures of every sort, natural history specimens and books poured in in such quantities that it would be difficult to find a similar wealth of collections in any other German commercial school.

On the fourth of March, 1856, the committee received permission to proceed with the opening and organization of the school, and the time for opening the school was set for the autumn of 1856. After the election of Mr. Karl Arenz, of Dusseldorf, as director of the institute, it was opened in a formal manner on the fourth of October, 1856. The following quotations from the inaugural address of the director are of general interest:

"The commercial schools are a product of this century. The only one whose existence dates back into the preceding century is that of Büsch, the father of German commercial schools, which had been founded by him in Hamburg in 1768, under the name of 'Commercial Academy.' The school disappeared later, leaving nothing behind it but the grateful recollection of its honorable foundation and its meritorious work. The commercial schools of to-day nearly all started about the same time, and are of the same general character. Schiebe pointed out the way in which they all thought they could prepare for the active career of the merchant. But the question as to how far these institutions were and are adapted to answer to the mighty advance of our material interests is a question which we cannot further investigate on this occasion. For it is our duty to-day to consider this new institution whose opening we celebrate.

"If we ask for the reasons which have called it into existence, it is not difficult to find them. In the time of a growing tendency toward the independence of every individual and every class, the necessity of the declaration of independence on the part of educational institutions which serve the various practical needs of modern life becomes evident. Commercial institutions belong in the same category with the technical institutions, in so far as they have the common purpose of promoting in the first instance the development of our material welfare, but they are distinguished from these by certain internal qualities, by the fundamental principles underlying their foundation. In the case of the former it is the mathematical and natural science training through which the technical training is accomplished. In the case of the latter, on the contrary, the thread which runs through the curriculum, co-ordinating and uniting its various parts, is not higher mathematics, is not natural science, but is that thorough general culture which embraces a complex of general social knowledge and experience relating to the knowledge of the earth, relating to the economic nature of its inhabitants and to one's native country. The necessity and justification of the existence of commercial schools, which met so many objections in every quarter, and which, indeed, have given rise to most serious criticisms, are to be found in the necessity of the higher scientific training of the merchant. This appears more and more imperative every day, as this alone qualifies him to work in the different branches of trade and commerce with such foresight and certainty as is rendered necessary by the advance of our social relations.

"The commercial schools must answer these demands. To use an expression of the elder Blanqui, the organizer of the oldest and most important commercial school in France: 'They must organize our trade and commerce by training and instruction.'

"I have already said that for a long time the most severe criticisms were made upon these commercial schools, and yet this has not prevented their growth and development. Men were not willing to grant them an independent standing, and yet they gave them a certain place in the polytechnic school. This declaration of dependence was the first step toward independence. For experience has shown that this union of a commercial division with a polytechnic school was an unequal one, and very disadvantageous for commercial instruction. For, on the one hand, the natural centre of gravity of commercial instruction is not to be found in such a union, and, on the other hand, it has never been able to secure, in such a combination, equal recognition with the other faculties of the polytechnic school. This explains the unsatisfactory results of such commercial courses both from a statistical and scientific standpoint. The union of technical and commercial courses leads, moreover, to what is, from a pedagogical point of view, a wrong treatment of the pupils, and this is the moral ground which compels us to urge a separation of the commercial schools from the technical institutions, and an independent organization of the former. The technical institutes accomplish excellent results in their own sphere, but the very excellence of this work means injury to the commercial side.

"The merchant, since he belongs to the higher classes of society, must receive such a training in the school as will fit him to maintain his position. This school must be for him a technical or professional training school. It stands in the midst among all the other technical and professional schools, and utilizes them all. It has peculiar characteristics of its own, and must, therefore, be independent. I will not, however, dwell further upon this point of the independence of commercial schools, for fear of exposing myself to the same ridicule as the learned scholar who wished to lecture to Hannibal upon the art of war.

"Let us consider for a moment the organization of commercial schools. If we wish for success, the plan of organization must not be a rigid one. It must not be for the school an iron frame which shall hold it within unchangeable limits. On the contrary, it must have regard to the very life of the institution itself, and must correspond to the demands of the ever advancing development of trade and industry.

"If we consider the organization of the curriculum which our scheme has accepted as the basis of the higher training of the merchant, its fundamental principle appears to be the greatest possible thoroughness, and continual reference to its practical applicability. The theoretical and practical sciences must aid and supplement one another. The first formulate general laws; the latter teach their application to given material. To go from theory down to practice, and to rise from practice to theory, is, and must be, the leading principle in the organization of the commercial school. It will draw everything into the circle of its activity; it will tend to fit the merchant to occupy the position with honor and success in which he has been placed by the relations of modern society. To limit the education of the merchant to that quantity of knowledge known in ordinary life as mercantile would be to mistake his present position and

his far-reaching circle of activity. The merchant is, to use the expression which the municipality of Mons employed in an address to the King of Belgium, on occasion of the celebration of the constitution in July, 1856: 'He is, so to speak, the industrial centre into which all the threads run, and in which social relations cross each other and unite; into which they lead; from which they again run out in order to establish new combinations, which again find their common point in this industrial centre.'

"The merchant must have a broad view. He must be trained to be at home in all relations, for his activity is an ever-changing one; it knows neither time nor place; it enlivens, moves and supports the material interests of society. Commerce embraces in its giant arms the whole world, and forces it to put all its powers at its disposal. It unites by the stroke of the pen all the countries of the world.

"The educational institution, therefore, which is destined to work out the higher training of the merchant, must, above all, take into the circle of its consideration everything which can be made useful for its purpose, and this it can do if a reasonable pedagogical plan be followed in the division and distribution of its subjects of instruction, and if we do not lose sight of the fact that the various sciences are not to be treated separately as in the various special and technical schools, and are not to be taught for their own sake. For it is perfectly plain that we can accomplish nothing in any science, which the higher commercial school takes up, if it is to be taught for itself alone. In technical schools, academies and other higher professional institutions, the particular branches of science and the manner in which they are to be taught and utilized are determined and conditioned by the purpose in view. I need only mention chemistry, mechanics and other practical sciences.

"Although it is true that the merchant can never be entirely separated from the manufacturer, and that the one activity continually runs into the other, yet it cannot be our purpose to make of the merchant a technically trained manufacturer, a scientific technologist. They go together, it is true, but they are not identical, the polytechnic trains the latter, the higher commercial school the former, and we must leave to each institution its peculiar work. The scheme of instruction which is to train merchants must be an associative one; it must know how to present in a clear light that which is relative, in its relative relations; it must know how to create a whole out of the manifold elements in its curriculum. It must form an organism; for the life of the educational system must be organic. In it all the various means of education must work toward a unity of result, and, therefore, the main thing in the commercial school is the unity of its curriculum. This attempt to secure a unity by the combination of many different elements has not always been successful. It is, however, the fundamental thought of this institution.

"We have included in our curriculum three classes of educational branches: First, the really technical or professional; second, those which may be included under the head of applied sciences; and third, the purely general or liberal elements. I need not dwell upon the first, for that is the narrowly technical, the so-called mercantile training, but this will become a mere dead routine if it is not supported, supplemented and enlivened at every point by science. Clearness of vision and thorough self-control, the fundamental characteristics of the merchant, can only be acquired by science; just as a wealth of vision, freshness, vividness are to

be obtained for science only from life itself. The real specific activity of the merchant is concerned with office duty, with the handling of products, and with the direction of commerce and trade. The knowledge of products considered as the combination of various kinds of knowledge necessary in dealing with commercial products is based upon natural history and chemistry, which play such an important part in the physiology of animals and plants, and has made modern mineralogy largely a chemical science. These two subjects are necessary as a means of recognizing products and of judging of their genuineness and adulteration. Technology is also an auxiliary science in the knowledge of products, for this teaches the merchant something in regard to the various branches of manufacture—spinning, weaving, etc. The knowledge of simple machines belongs also to this department. The limits of instruction in these subjects must be set by the extent of those products the knowledge of which is absolutely necessary to the merchant, and that instruction in this field must relate primarily to domestic, raw and manufactured products is a matter of course.

"Another side of the mercantile training which is intimately related to that just discussed is the geographico-statistical. Geography and statistics are the basis of exchange in commodities. The branches which assist in directing the course of commerce are history of commerce, which teaches one the course of human civilization; and, political economy based on this branch and on geography and statistics. To the narrowly mercantile training belongs also skill in arithmetic and in the various practical work belonging to the office in its various relations, also in the usages of trade and in commercial legislation, as well as fluency in the use of modern languages so far as they are commercial languages. This side of the training of the merchant must also have its centre of gravity or point of combination, and this may be found in a model office, imitating an actual office; the value of which, however, it must be admitted, is often called into question. It is, however, in my opinion, so to speak, the laboratory of the future merchant, which at present is lacking in most German commercial schools, and which we must organize here.

"But besides this specifically technical training the institution must also afford its pupils a patriotic and moral training; a training of the character, for the future position of our pupils demands more than an exclusively professional education, and nothing is more suitable to throw into their true light the well-known socialistic and communistic vagaries than correct conceptions of religion, patriotism, history, political economy, and law. One's character gains in firmness by a consideration of the truths of science; that indifference which so often forces intellectual and material interests into the background and favors the development of moral and political weakness, must yield to determination and moral power. If we leave no intellectual power of the youth undeveloped, we may hope on the one hand that the pupil during his residence in this institution will gain besides the necessary knowledge for his future calling, that enthusiasm for the practical work within it which will be a great source of encouragement during all his future life; and, on the other hand that this enthusiasm will serve as the basis of a view of life which will maintain for the youth during his manhood an open eye and a ready hand to aid and assist the great material and ideal interests of our society.

"These, in brief, are the principles which have led me in working out the plan of organization of this institution, which already counts in

the very first hour of its formal existence a greater number of pupils than any other commercial institute of the present or former times."

Thus the institution was opened, and has continued its work from that time to this, except when it was disturbed for a short time during the summer of 1866 during the Austro-Prussian war.

That the establishment of the Commercial Academy of Prague really exercised an epoch making influence in Austria, and that all the other institutions established later have taken its organization more or less as a model, is plain from the fact that the well-known statistician, von Roden, who had been chosen a member of the organizing committee of the Vienna Commercial Academy immediately entered into correspondence with Director Arenz, in order to inform himself thoroughly as to the institute in Prague. The Academy for Trade and Industry at Gratz also took the institution at Prague as its model for the commercial division of its work; the Commercial School at Reichenberg likewise based its curriculum upon that of the institute at Prague. The Prague Academy has also exercised a considerable influence upon the development of similar schools in other countries.

It is an interesting fact that the director at this school considers it a very unwise thing for boys to go from elementary schools first into business, and then to return to the commercial school at a later period for further education. He says that the idea that this is a good plan to follow rests upon a false educational notion. About two and one-half per cent of the students of the Prague Academy, up to 1872, had followed this plan, and the experience of the school in the great majority of the cases shows that it is very unwise for young people to go into a business house before they take the course of the school, and that the other plan of taking the course first and then going into a business house is the proper one. In the latter case the advanced instruction of the academy joins directly on to the general course of instruction which the pupil has had in the elementary school. The youth is, moreover, more willing to adapt himself to the necessary school discipline; it is easier for him to take up certain subjects, and he adapts himself more readily to steady work in the scientific and practical branches than when he is older.

The supposed advantages of the other plan are generally bought at the expense of the great disadvantage that many important details of previous instruction slip out of the memory during the time spent in the business house, by which it becomes more difficult for the youth to take up his course of study again. The certificate of having served an apprenticeship is not able to give the youth that tendency toward study which he loses in practical life. On the other hand, the young man who enters a business house after completing this course takes with him a riper mind, on account of which he can learn the details of the business much more easily than he otherwise could.

The director is also of the opinion that the pupils who attend the academy ought not to be otherwise occupied. For this institution, like every other school, demands an absolutely undivided application, without which no systematic, coherent and thoroughly rounded education can be obtained. If the pupil wishes for the best results from his instruction, he must, so long as he attends the academy, give his entire time to the work, and those youths who have attempted to unite practical work with instruction in the school have soon experienced the disadvantage of this combination, and have given up either one or the other.

The attendance at the academy at Prague was so large in the school year 1857–1858 that the instruction had to be given in parallel divisions of from fifty to fifty-four pupils. The second year of the course was opened in the autumn of 1857, and the third year of the course in the autumn of 1858. The higher commercial school consisted, therefore, of a regular course of three years, and of a preparatory class. The latter was abolished in 1864, as the number of students steadily decreased, and the necessary preparation could be obtained in other schools owing to the increase in the number of gymnasia and real schools. As the term academy was used for the commercial schools founded in Buda-Pesth in 1857, in Vienna in 1858 and in Gratz in 1861, the Commercial Council was led to claim the right to the same title for its institution, which was granted it by an ordinance of the government on the fourteenth of March, 1866, in consideration of the comprehensive curriculum of the Higher Commercial Institute in Prague, of the firm establishment of the same in pecuniary matters, and in consideration of its excellent work.

In the winter of 1859–1860 the popular evening lectures were established, intended for the general public, on bookkeeping, correspondence, commercial arithmetic, commercial law, French, tariff legislation, money and banking. In the year 1860–1861 a new element was introduced into the curriculum under the title of Exercises in Speaking, which will be noted again later. In 1862 the relations of the professors were regulated by a set of ordinances adopted by the council relating to their rights and duties. In 1863 the council ordered that from that time on the pupils of the Commercial Academy, in cases of illness, should be treated gratis in the new Merchant Guild Hospital.

On the thirty-first of December, 1870, the president of the Commercial Council, in the presence of a delegation of that body, presented Director Arenz a written address in which the council expressed its thanks to the director of the academy for his services to the institution. The following quotation seems worth noting:

"On the fourth of October, 1856, the Merchant Guild of Prague held a celebration, the memory of which will long remain in the minds of those who were permitted to share in it. We opened at that time an institute whose mission was to train and educate in the commercial sciences the rising generation of merchants, and in this way to contribute to the prosperity of our national trade. If we consider the results achieved by this institute, in the course of the fourteen years of its existence, we must acknowledge that they are in every respect satisfactory.

"The Commercial Academy of Prague holds to-day an honored position among the educational institutions of our beloved country, and has had an attendance, since the first year of its organization, far exceeding the expectations of its founders, and forming the most trustworthy measure of its services. Hundreds of young men who have completed the three-year course of the institute have gone out into practical life, and are at work to-day in the various commercial and industrial houses at home and abroad, utilizing there the knowledge which they acquired in the Commercial Academy at Prague.

"That this institute has been able to develop such a blessing-bringing activity is due, Mr. Director, in large part to you, who conceived the plan

according to which the instruction in this institute should be organized. You have been, since its beginning, the director of its work, and have accomplished in this capacity a work with your colleagues, of the results of which the Commercial Academy may well be proud."

The purpose of the Prague Academy has been from the beginning to direct the activity of its pupils immediately toward the true and at the same time all-round and strictly professional training of the future merchant, by subordinating everything to this end, and by bringing the various branches of learning into such an internal connection that they supplement and explain one another. Its course of study, as described above, embraces three classes; each with a one year curriculum. On account of the large number of pupils each of these classes is divided into two sections or parallel divisions with the same instruction.

The method of instruction has been from the beginning the catechetical, which keeps the teacher and the pupil in unbroken relation to one another, and enables the latter to have at every moment a correct judgment as to the work of the pupil, and thus to concentrate the work of the instruction upon the real work of teaching, and not upon the mere preparation for the final examination. Instruction in the model office is also free from non-essentials. Its main purpose is directed toward accomplishing a clear insight and understanding of details both in themselves and in their relation to the whole, and in this way to develop the pupil into a thinking merchant, combining for this purpose theoretical accounting with the other auxiliary work which belongs to it and with correspondence.

A not unimportant element in the instruction is formed by the exercises in speaking, mentioned above. After a brief introduction relating to the fundamental principles of rhetoric and the history of eloquence, the pupils of the last year's class are required in turn to make speeches in the first place upon subjects which are assigned to them. The essays are carefully examined beforehand by the respective professors in order that nothing unsuitable shall be presented. The speaker then delivers his essay without reference to his manuscript. After this speech a debate is opened, in which any other pupil may take part after those regularly assigned for the work have delivered their speeches. The debates are conducted in the presence of a professor, who, at the close, gives a general criticism of the work.

The instructing body of the academy consists of a director, professors and the assistant teachers. The professors are appointed permanently after a probation of three years.

The youth who attend the Commercial Academy are either regular or special pupils. Regular pupils are those who expect to complete all the required subjects in the curriculum. Special students are those who wish to attend the instruction in single branches. The pupils who wish to enter the lowest class must be able to show that they have completed the lower real school, or a lower gymnasium, or an equivalent course. Those who present certificates of graduation from either of the above-mentioned schools are admitted without examination. The pupils who desire admission into the middle or upper class must show by an examination that they possess the requisite knowledge of the curriculum of the first and second years respectively. At the close of the three years' course the final examination is held. This examination is both

oral and written; it begins early in the month of July and lasts fourteen days. The final certificate, signed by the director and all the professors engaged in the work of the last year, notes the work done in each branch, giving the marks: "very good;" "good;" "satisfactory;" "hardly satisfactory;" "bad." A final mark is given covering the entire examination, and classing the work either as "excellent," "well done;" or "pass."

Whoever does not succeed in obtaining at least the mark of "pass" receives no certificate, but upon demand he may receive a statement that he has attended the work of the class during the past year. The students who pass this final examination with success are admitted into the one-year voluntary service in the army, and into the postal service and administrative service.

The school endeavors to secure for its graduates positions in prominent business houses, industrial establishments, banks, etc. The mercantile public knows that the academy recommends only competent persons and its candidates find, therefore, responsible, and in most cases, well-paying positions.

As to the financial control of the academy, this is exclusively in the hands of the Commercial Council. The scientific and pedagogical control of the institute is entirely in the hands of the director and the faculty. Each class has its own director or dean, who has the special duty of looking after the particular class, and forming a sort of intermediate grade between the other teachers and the director.

The yearly tuition is 150 florins. Special students pay at the rate of seven gulden a year for each course, of one hour a week.

The Administrative Council of the academy may grant entire or partial remission of tuition. In 1873 about twenty-five per cent of the students were exempted from tuition, owing to the fact that they held scholarships or that the Administrative Council had exempted them from tuition.

It is interesting to note that the institution has been, from the beginning, entirely dependent on its own resources, and has never been in a condition compelling it to ask for outside aid, whether in the form of government grants, or in the form of contributions from private citizens or corporations, with the exception of the endowment mentioned above. Not only has it been able to pay its expenses out of its income, but it has been able to add from time to time a certain surplus to its endowment.

In November, 1872, a course in railroading, postal and telegraph service was organized. Students desiring to enter this course were required to have passed through an upper gymnasium, an upper real school, a commercial institute, or some other equivalent school, or they were required to pass a corresponding examination. The candidates for the telegraph course must not be over seventeen, and those in the railroad course not under twenty nor over thirty. Persons actually employed in railroad service were admitted as special students. Postal cadets, stationed in Prague, were required to attend the postal service course. The curriculum extended over one year. The courses began on the third Monday in October, and in the case of the course in telegraphy, lasted for four months. The lectures in the railroad courses and in the postal service courses lasted until the middle of April. The curriculum was organized as follows:

I. POSTAL SERVICE.

	Hours per Week.
a. Theory of the post-office	3
b. Commercial geography and statistics	2
c. French language	2
d. English language	2

II. RAILROAD COURSE.

a. Traffic service	3
b. Transportation	3
c. Telegraph and signal service	

III. COURSE IN TELEGRAPHY.

a. Theoretical work	2
b. Telegraph service	3
c. Practical work	1 hour per day.
d. French language	2 hours per week.

One hundred and fifteen students were enrolled in the telegraph course; seventy-three in the railroad course; and sixty-nine in the postal service course. The tuition for the telegraph course and for the railroad course was twelve florins each, and for the postal service eight florins. Those who had passed the examination in the telegraph course were eligible for appointment in the telegraph stations throughout Bohemia.

According to an order of the ministry, dated January 7, 1875, these technical courses were to remain a permanent part of the Commercial Academy of Prague, and a State grant of 2000 florins was made for three years, beginning with 1875. These courses were, however, abolished in the year 1877, and the Commercial Council was compelled to let them drop, owing to the fact that it could not carry them on with good financial results.

The evening courses, spoken of above, owing to decreasing interest, increasing cost and growing difficulties in the way of carrying them out, were dropped at the end of the school year 1860–1861.

PURPOSE AND PRESENT ORGANIZATION OF THE ACADEMY.

The present purpose of the academy, as expressed in the announcements of the school, is to furnish to those young men who have a proper preliminary education, a theoretical and practical training for commerce in the widest sense of that term. It is a special school for the purpose of giving a special training, characterized by a fundamental feature running throughout the entire course of its instruction, and which aims to give its pupils the kind of training which will prepare them, upon leaving the school, for the various departments of business activity. The various subjects in its curriculum are united in a close organic connection; they complement and explain one another, and, as a whole, aim at raising the level of the general culture of the pupils, at the same time that they impart the necessary special knowledge. The instruction in the mercantile subjects, in the narrow sense, is not limited either to purely theoretical discussions nor to the acquisition of commercial mechanical facilities. It is,

on the contrary, at once theoretical and practical. It is intended that the pupils shall acquire the necessary insight into the actual conduct of trade and commerce, at the same time that they acquire those external facilities which belong to this particular branch of human industry. For this latter purpose the various practical exercises in the model office are especially intended.

Besides the scientific and professional training of its pupils, the Commercial Academy lays a special emphasis upon a broad training and the moral development of its pupils, in order to secure as far as possible the desirable maturity and firmness of character appropriate to the social position of the merchant.

ORGANIZATION OF THE INSTRUCTION.—The Commercial Academy conducts two distinct courses; a three-year course, and a one-year course. The latter is intended for the graduates of the intermediate schools. The German language is used as the language of instruction, and the following subjects are included in the curriculum of the three-year course:

I. German Language and Literature.—Exercises in grammar, in style and in speaking, in order to train the student to a correct and fluent expression of his thought. The exercises in speaking are intended to train the pupil to self-control and clearness in expressing himself in discussions before the general public. The history of literature makes the student acquainted with the most important products of German literature as an important element of general culture.

II. The Other Important Foreign Languages.—French and English are required subjects; the participation of the pupils in Italian, Spanish and Bohemian is optional. The chief weight in these languages is laid on practical instruction in speaking and writing for the mercantile career; mercantile correspondence in each of these languages receives, therefore, special attention, at the same time the students are expected to make themselves acquainted with the most important literary works in these languages.

III. Algebra.—Fundamental conceptions; logarithms; equations; calculations of probabilities; proportions.

IV. Mercantile and Political Arithmetic.—Knowledge of usage; practical training in all the various kinds of calculation useful in business life; arbitrage; calculation of funds and loans and life insurance; casting of produce and usages.

V. Theory of Trade.—Correspondence; office work; single and double entry bookkeeping with practical exercises (these last are provided for in the model office); the conduct of the model business house (the pupils are divided into several sections representing agencies or offices in the different centres of trade which carry on commerce with one another). The mercantile, banking and shipping business receive special attention. Great care is taken that each pupil shall receive training in each of these different departments, without losing sight of the business as a whole. At the end of the year the operations of the house are closed and balanced.

VI. Penmanship.

VII. Mercantile and Industrial Geography.—Study of the Austro-Hungarian state; a careful study of the Austrian empire in regard to

its physical and technical development, and its commercial importance. Industrial and commercial statistics by the comparative method.

VIII. History with Continual Reference to Commerce and Trade.—General history of the world's commerce; history of the development of domestic trade.

IX. Political Economy.—Development of the fundamental notions for the correct conceptions of economic relations; theory of production, exchange, income and taxation.

X. Commercial and Industrial Legislation.—Study of the important provisions, from a mercantile point of view, of the civil law, of commercial law, and industrial and financial legislation.

XI. Natural History.—With special reference to the relations which are most important to the knowledge of products.

XII. Physics.—The most important natural laws and phenomena in their technical and commercial applications.

XIII. Knowledge of Products, Chemistry and Technology.—The study of the origin and composition of commercial products, and the methods of testing the same as to their constituents, quantity, genuineness and adulteration by practical exercises. Discussion of the most important technical and mechanical manufactures, and explanation of the machines used in such work. Third-year pupils have the opportunity, by practical excursions, of becoming acquainted with the agriculture, trade and industry of Bohemia.

XIV. Stenography.—With special reference to the needs of the office.

Means of Instruction.—In order to promote the efficiency of the instruction the academy possesses:

1. A library for the use of teachers and pupils.

2. A collection of products which is kept up to date so that it may fairly be considered an exposition of everything which is important for trade and commerce.

3. A natural history museum, in close connection with the collection of products.

4. A collection of physical, mechanical and technological apparatus, so far as is necessary, to make the instruction of the school effective.

5. A collection ot technological wall-maps as an aid to instruction in chemistry and knowledge of products.

6. A chemical laboratory for teachers and pupils.

7. A collection of coins.

A satisfactory idea of the manner in which these various subjects are treated will be found by comparing the synopsis of the subjects of instruction given in the Vienna Commercial Academy, which covers essentially the same ground.*

Privileges Connected with the Certificate of Graduation from the Academy.—The regular pupils who have completed the entire course and passed the final examination are entitled to take advantage of the one-year military service law.

* See account of Vienna Academy given above.

DISTRIBUTION OF HOURS AND SUBJECTS.

CURRICULUM. I.—THREE-YEAR COURSE.

Required Subjects of Instruction.	Hours per Week. 1st Year.	2d Year.	3d Year.
Theory of commerce	1	1	—
Office work and correspondence	2	—	—
Mercantile correspondence and bookkeeping	—	4	5
Mercantile arithmetic	3	3	2
Political arithmetic	—	—	1
Usage and casting of produce	—	—	1
Algebra	2	1	—
Geography	2	2	2
History	2	2	2
Political economy	—	—	2
Commercial legislation	—	—	2
Natural history	2	—	—
Physics	2	1	—
Chemistry and technology	—	2	2
Knowledge of products and technology	—	2	3
German	4	3	3
French language and correspondence	4	4	3
English language and correspondence	4	3	3
Penmanship	2	2	1
Total	30	30	32
Optional Subjects of Instruction.			
Italian language and correspondence	3	3	3
Spanish language and correspondence	—	2	2
Bohemian language and correspondence	2	2	2
Practical chemistry	—	—	4
Stenography	2	2	1

Statistics.—The report of the academy for 1891 and 1892 gives the following information as to students attending the three-year course:

Four hundred and forty pupils attended the course. Of these, 152 were in the first year's course; 161 were in the second year's course; 127 were in the third year's course. It will be observed that the number of pupils in the third year formed a very large per cent of the number in the first year. Of the 434 whose names were on the rolls at the end of the year, 177 were Catholics; 17 were Protestants; 240 were Jews; 371 were from Bohemia; 105 being from the city of Prague alone. There were also 6 students from Germany; 3 from Russia; 2 from Roumania; 1 from France; and 1 from Egypt.

Of the 434 pupils, 14 were 15 years of age; 81 were 16 years of age; 130 were 17 years of age; 120 were 18 years of age; 58 were 19 years of age; 24 were 20 years of age; 4 were 21 years of age; 1 was 25 years of age; and 1 was 28 years of age—showing that the great majority were between the ages of 16 and 20. Considerably more than three-fourths of the students were over 17; about one-half over 18; 191 were sons of merchants, 49 of manufacturers, 79 of government officials, 33 of produce men, 26 of farmers, and the others of various other professions. It will be noted that the vast majority of them were from what might be called the business classes.

It is interesting to note that 106 of the pupils studied Italian; 42 Spanish; 187 stenography. Also, that 10 of the students were exempted from the payment of fees altogether; 65 received 50 per cent remission; and 12 held the various scholarships.

THE ONE-YEAR COURSE.

The purpose of the one-year course is to offer to young men with an advanced preliminary training, in the shortest possible time, such an amount of commercial knowledge as will prepare them for a position in some business house, or as will supplement their general educational training, so as to be of assistance in some other occupation.

Organization of the Instruction.—The curriculum is constituted in the following manner:

	Hours per Week.
Bookkeeping and mercantile correspondence	6
Theory of commerce and office work	2
Mercantile arithmetic	4
Political arithmetic	1
Commercial law	2
Commercial and industrial geography	3
Penmanship	1
Study of important branches of domestic industry	2
Total	21

A synopsis of these subjects may be fairly well understood from the similar synopsis in the case of the Commercial Academy at Vienna.

Various Provisions in Regard to this Course.—No person can be admitted to this course who has not successfully completed the highest class of a domestic or foreign intermediate school. Persons are not required to have passed, however, the final examination in this intermediate school. As no students are admitted with any different preliminary training all the pupils are classed as regulars, and no student is admitted unless he takes all the instruction given. Only such pupils are admitted as are thoroughly at home in the German language; foreigners must give evidence of a mastery of German before being admitted to this course. The number of pupils is limited to forty. The course begins on the first of October and closes the middle of July. The tuition is 150 florins a year; no remissions or reductions of tuition are granted.

Statistics.—The report of the academy for 1891–1892 shows that there were 16 pupils in this course at the end of the year: 8 Catholics; 1 Protestant; 7 Jews. All the pupils were over 18 years of age. Two were 18 years old; 1 was 19 years old; 2 were 20 years old; 4 were 21 years old; 5 were 22 years old; 1 was 23 years old; 1 was 25 years old. Eleven were graduates of the gymnasium and 5 of the real school.

Budget of the Academy.—The financial report of the Merchant Guild of Prague for the year ending December 31, 1891, shows that the income of the academy for that year was 55,522.50 florins. Of this sum 1600 florins came from endowment, 52,512.50 florins came from tuition in the three-year course; 1275 florins came from tuition in the one-year course; 135 florins came from laboratory fees. Its expenses were classed as follows: taxes, 1124.30 florins; sinking fund and rent, 4000 florins; salaries, 27021.64 florins; contribution to the Merchant Guild, 2319.98; repairs, 1567.56 florins; heating and lighting, 1081.79 florins; printing, 2063.41 florins; various other expenses, 944.62 florins. Total, 40,122.40 florins. Showing a surplus of 15,400.10 florins. The estimate for the year 1892 was: income, 53,300 florins; expenditures, 46,000 florins. The total expenses for the academy up to December 31, 1885, amounted to 889,476.40 florins; the total income amounted to 918,905.53 florins.

Statistics of Attendance.—The statistics of attendance are given in the following list:

School Year.	Preparatory Year.	1st Year.	2d Year.	3d Year.	Total No.
1856–57	69	123	—	—	192
1857–58	56	118	107	—	281
1858–59	30	82	97	96	305
1859–60	25	85	74	75	259
1860–61	24	87	76	55	242
1861–62	23	77	75	52	227
1862–63	18	93	64	55	230
1863–64	14	85	86	42	227
1864–65	—	72	89	55	216
1865–66	—	52	63	57	172
1866–67	—	46	48	43	137
1867–68	—	64	56	34	154
1868–69	—	73	66	37	176
1869–70	—	97	72	57	226
1870–71	—	112	96	60	268
1871–72	—	143	113	81	337
1872–73	—	158	130	82	270
1873–74	—	151	144	110	405
1874–75	—	70	132	121	323
1875–76	—	69	78	108	255
1876–77	—	72	68	76	216
1877–78	—	68	69	58	195
1878–79	—	81	67	62	210
1879–80	—	81	84	56	221
1880–81	—	101	86	77	264
1881–82	—	100	113	75	288
1882–83	—	97	97	105	299
1883–84	—	118	94	89	301
1884–85	—	117	125	89	331
1885–86	—	107	121	111	339

According to the foregoing table it appears that the attendance at the academy from 1856 to 1885 amounted to 3234, of whom about 86 per cent were from Bohemia, and about 13 per cent from foreign countries. Of these pupils 61 per cent were sons of business men; 19 per cent were sons of officials and German officers; 14 per cent were sons of farmers, capitalists, etc.; 6 per cent were sons of professional men. Fifty-three per cent came from real schools; 31 per cent came from gymnasia; 12 per cent came from private schools; 4 per cent came from other commercial schools.

It appears that of this number 2128, or 70 per cent of all the pupils who entered the school, completed the three-year course. Of later years the record is very much more favorable, rising in some instances as high as 95 per cent.

Faculty.—The faculty for the year 1891–92 consisted of a director and seventeen teachers. The names and subjects are as follows:

Director:	Subjects:
Herr Dr. Ernst Kaulich	Algebra and Mercantile Arithmetic.
Teachers:	
Herr Ludwig Ausserwinkler	Chemistry and Knowledge of Products. Custodian of Collections.
Herr Franz Bardachzi	Bohemian Language, Literature and Correspondence.
Herr Eduard Deimel	Theory of Commerce, Mercantile Arithmetic, Bookkeeping and Correspondence.
Herr A. Fischel	Penmanship.
Herr Wilhelm Fischer	Algebra, Physics and Natural History.

Teachers:	Subjects:
Herr Josef Guckler	Stenography.
Herr Alois Kraus	Geography, History and German.
Herr Karl Leclaire	French Language, Literature and Correspondence.
Herr Josef Odenthal	Mercantile Correspondence and Bookkeeping, Director of the Model Office.
Herr Gustav Reiniger	English Language, Literature and Correspondence.
Herr Josef Riedl	German Language and Literature.
Herr Dr. Gustav Rolin	French and Spanish Language, and Spanish Correspondence.
Herr Gustav Rothbaum	Theory of Commerce, Office-work, Mercantile and Political Arithmetic and Usage.
Herr Dr. Anton Scholz	Geography and History. Acted as Librarian.
Herr Wenzel Sobek	Bohemian Language.
Herr Alois Tonelli	Italian Language, Literature and Correspondence.
Herr J. U. Dr. Albert Werunsky	Commercial Legislation and Political Economy.

Salaries and Pensions.—It is an interesting feature in most of the European schools, whether private or public, that some arrangement is usually made for the granting of pensions to teachers who have served a certain length of time in the institution. The Merchant Guild of Prague has provided a pension fund, to be made up partly of grants made by the Merchant Guild itself; by contributions of the professors in the school, and by a certain per cent of the surplus income of the school.

Every professor is entitled to a pension after serving ten consecutive years as a member of the faculty of the Commercial Academy. The pension is payable as soon as the professor, in consequence of bodily or mental disease, becomes unable to act as instructor; in all cases upon the completion of forty years of service. The amount of the pension, after ten years of service, is forty per cent of the salary, and rises two per cent every year, so that after forty years of service a professor is entitled to his full salary for the rest of his life.

The professors are appointed at a salary of 1000 florins, which is raised every five years by the sum of 200 florins, so that after twenty-five years of service the salary amounts to 2000 florins. Every professor who wishes to enjoy the pension privilege must, within twelve months after his definitive appointment, contribute the third part of one year's salary to the pension fund, and must further contribute a third part of each quinquennial addition to his salary. The widow of a professor who had become entitled to a pension is entitled to a pension of 350 florins a year so long as she remains a widow, and the allowance to the widow for the support of the children of the professor who had become entitled to a pension, is calculated according to the rule adopted by the government for civil service officials, provided that the pension of the mother and the allowance of the children shall not exceed the sum of 525 florins.

The preceding pages contain a description of the two most important higher schools for commercial studies in Austria, but these two schools do not, by any means, represent the only opportunity for youth, who expect to enter business, to acquire a special training for their future work. Indeed, it may be doubted whether any other country has organized so complete a

system of commercial instruction as Austria. The Department of Education has given special attention, in the last few years, to the development of this branch of instruction, and while the number of schools is not large, considering the needs of a modern industrial and commercial community, the system on which they are organized is an excellent one, and there is no doubt that it will be further extended in the near future.

Professor Glasser's book on "Commercial Education in Austria"* gives full information as to the present state of commercial education, so far as it can be ascertained from an exposition of the laws bearing upon the subject, and by the statistics as to attendance, etc., in these schools. According to a table printed in that work, there are thirteen commercial high schools of the general rank of the Commercial Academy in Vienna and the similar one in Prague, in the Austrian monarchy, excluding Hungary. About three thousand pupils attend these schools. There are one hundred and four other schools, which may be classed as commercial institutions, covering the ground, more or less fully, appropriated in this country by the commercial colleges, though in nearly all cases the curriculum is based upon more scientific principles and is more carefully developed in the Austrian schools than in our own. The same experience has been met in Austria as in other countries, that the attempt to develop commercial courses side by side with other courses in the same institution has not been successful. Generally speaking, such courses have given satisfaction to no class of people; they interfere with the healthy development of the other courses in the institution, and are uniformly neglected by the authorities of the institution with which they are connected.

* See list of authorities used in the preparation of this report.

B.

HIGHER COMMERCIAL INSTRUCTION IN FRANCE.

I. THE SUPERIOR SCHOOL OF COMMERCE AT PARIS.

CHAPTER I.

HISTORY OF ITS FOUNDATION AND DEVELOPMENT.*

In 1820 two Paris merchants, MM. Brodard and Legret, interested in the future of French commerce, conceived the project of founding a school for the purpose of preparing young men for business by special studies, supplementary to their general instruction. These men of enterprise, whose names deserve to be saved from an unjust oblivion, created for this purpose, in the Hotel des Fermes in rue de Grenelle-Saint-Honoré, an establishment of a type at that time absolutely new, to which they gave the name, "Special School of Commerce."

Such an enterprise, which seems to us to-day so natural, was bold for the epoch at which our modest innovators undertook it. In fact, public opinion did not at that time recognize either the necessity or even the possibility of such instruction, for which practice alone up to that time had provided. If people would admit, on being pressed, that our industry needed trained assistants, capable of constructing and caring for the machines† which it employed, by repairing accidents which occurred in foundries and machine shops, no one thought that commerce could ever become a subject of instruction in the school, because, as everyone claimed, on account of the multiplicity of the specialities of which it is composed.

The basis of this idea, which furnishes some specious arguments of a nature very seductive to the prejudices of the superficial minds of mere routinists, will not bear examination. For if it is true that, after having studied the sciences listed in the program of commercial instruction, there are still in each branch of commerce peculiar difficulties, dangers, resources, in a word, trade secrets, so to speak, it is not less true that the man who has been prepared by study will advance more surely and steadily along his chosen way, and that, circumstances being equal, he will possess, after a short period of practice, an undisputed superiority, thanks to the instruction which he has received. In other words, there exists an amount of commercial knowledge, at once theoretical and practical, which one can acquire in a school, and which can be taught only there. It must be added, of course, that the actual management of real business affairs can alone complete this instruction.

The creation of a special school of commerce, a scientific institution up to that time without a predecessor, offered other numerous difficulties. It was not only necessary to group into one body of studies, methodically

* For a full account of this branch of instruction in France consult Léautey, Ecoles de Commerce, from which the account here given is taken, partly in translation, partly in abstract. Consult list of authorities used in preparation of this report.

† The School of Arts and Manufacture which was to provide so well for this instruction was not founded until later (1829).

organized, all those branches of knowledge which might be useful to a merchant, but also to choose and train professors; to select and classify the studies; and, finally, to find a public, a clientele. In a word, one had to create the pupils, so to speak, and this was not the easiest thing in the world, considering the ideas of the time.

Moreover, the obstacles which these innovators encountered did not come alone from the prejudices against which the schools of commerce to-day must still struggle. It was denied at that time that we possessed the qualities essential to commerce; that our French spirit was suited to the slow continuousness of distant trade; to the chances of long extended speculations upon which the business of importation and exportation depends. One did not see that our spirit, because of its very impressionableness and mobility, lends itself admirably to all these forms of business. Finally, men refused to recognize that our French intelligence, so keen, so supple, so broad, contained the germs of ability which necessity on the one hand and our high tastes and love of riches on the other were destined to develop. In proof of this fact, the industrial and commercial progression, proven by statistics, may be cited—a progression which would have been doubled and tripled by that economic instruction, the lack of which France cruelly misses to-day.

In 1820 there were in addition, in the very situation of things, other serious obstacles. The country had just emerged from the great wars of the Republic and Empire, which had excited all its brilliant faculties, and it was very difficult for the nation to pass over quickly to the consideration of industry and commerce; to enter without hesitation upon that which men disdainfully called "A Mercantile Career." The young men of the middle class of society, for whom this new establishment was specially intended, leaned toward the so-called liberal careers; they wished to be lawyers, physicians, writers: no one wished to be a merchant. These young men regarded it as a sort of derogation, an acknowledgment of inferiority, to devote themselves to commerce, that is to say, to a specialty of the "earth, earthy," which did not merit serious study; and we have seen that the university, whose classical spirit incited to the admiration of the past, has contributed no little to confirm our countrymen in these ideas, which have paralyzed, and still paralyze, the industrial and commercial enterprises of France.

It was under these circumstances, little favorable to its development, that the new school, shortly after transferred to the Hotel Sully in the rue Saint Antoine, was organized. Some large buildings, spacious courts and a large garden were put at its disposal. A physical cabinet, a chemical laboratory and collections of products were established at a large cost. A numerous personnel, too numerous perhaps, was brought together. Finally, the school assumed a uniform, carried a sword, and all its internal movements were carried on to the sound of a drum.

But besides these features, a little ambitious for the ends of a private school, a council composed of distinguished men, members of the institute, bankers, manufacturers, merchants, who comprehended and appreciated at its true value the attempt of MM. Brodard and Legret, devoted itself to framing a program of instruction, an organization of studies, and modifying it according to necessity and assuring its execution. Having learned by study and experience what various qualities and what various branches of knowledge are indispensable to one who would undertake a

commercial career, these men, among whom we find the names of Chaptal, Jacques Lafitte, Ternau, Louis Marchand, Casimir Périer, J. B. Say, Charles Dupui, etc., sketched out with a firm and sure hand the program and the regulations of this new institution. Their wise provisions have been preserved in the school. They have served as a model, as a point of departure, for all the attempts of the same sort which have been made in France and in foreign countries. It was as a result of their advice, for example, that the new scheme of instruction was originally distributed into three years, and divided into three departments, or so-called "offices." No student could pass from one department to another without passing an examination. This council, which has continually maintained within the school its healthy traditions, the cause of its prosperity, is still in existence.

The beginning of the school was happy; pupils began to arrive promptly. One can even say without exaggeration that they came from every part of the globe. The proportion which has always maintained itself between French pupils and that of foreigners showed itself at the beginning, in the ratio of one-third or less of foreign students, and two-thirds for France. The faculty, well-chosen, learned and devoted, knew how to carry out in a happy way the plans adopted by the council, and during the first two years the future appeared to be secure.

However, misfortune arrived. The charges of the school were heavy, and, in fact, high in proportion to the real capital of the enterprise. The continued success of the school would have been able to meet this loss, but the current began to change before the prolonged difficulties rendered more serious by political events. The faculty found it impossible to repair the losses under the circumstances. Faults of administration were added, the situation became each day more difficult, the school changed hands several times, and finally came to an end after the revolution of July. From 1820 to 1830 the Special School of Commerce was under the successive direction of MM. Brodard and Legret, its founders; M. Monnier des Taillades, a former professor; M. L. Pelleport, a merchant; M. Poux-Franklin; and Adolphe Blanqui, directors of studies.

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Adolphe Blanqui, who held the chair of history, commerce and political economy, did not fear to undertake, upon his own personal account, an enterprise which up to that time had demanded so many victims.

Adolphe Blanqui was young, without wealth, already a father of a family. The times were bad, and the future threatening for his enterprise. However, he accepted the heritage of ruin with a firm resolution to turn back the current of public opinion which at that time narrowly followed the so-called "Protective Doctrine of National Labor;" resolved not to allow an institution to perish, which was consecrated to the diffusion of the principles of political economy, and to commercial liberty, to which he had already devoted his life. He brought to this useful work an indefatigable activity; an inexhaustible and charming spirit; a wide experience; and the numerous and useful relations which his brilliant qualities and the gracious amenity of his character had gained for him.

Adolphe Blanqui changed the name of the school and called it the "Superior School of Commerce," which name it still bears to-day. He then transferred it from the magnificent Hotel Sully to the more modest location in the rue Neuve-Saint-Gilles. There, as a wide administrator,

he could limit the expenses, and bring them into proportions better adapted to the resources of the moment. Followed by the pupils who loved him, surrounded by a small group of instructors faithful to the enterprise, he was an example to all of labor and devotion. He sacrificed his person and recoiled before no obstacle, and all this was done in such a way that in studying the history of this struggle, which lasted until his death, more than twenty-five years, one does not know which to admire the most, his courage, his activity, the variety of his knowledge, the fecundity of his genius, or the charming influence he exercised upon all who came near him.

The reputation of the institution increased with the growing celebrity of its director. The personality of Blanqui dominated it and protected it at the same time. Deputy from Bordeaux, elected a member of the institute in 1838, a brilliant writer, a popular professor, he threw upon the school the reflection of his own reputation. He created for it connections wherever his writings were read and appreciated. He drew upon it the attention of the government, whose aid he secured for it, and the institution was then known throughout the entire world under the name of "École Blanqui."

Another man who was also to acquire a certain celebrity, and to honor the school where he had been trained, and to contribute largely to its success was M. Joseph Garnier. Twenty years younger than its director, he became his co-worker and then his partner. His lovely character, his just and kind spirit gained for him the sympathies of many by which the institution profited. He remained as a professor of the school until his death, almost five years after. Certainly one can say that if commercial instruction had found in the numerous economists who have held power since 1820 the devotion and assistance which these two men of whom we speak had given, the destinies of this instruction, and, consequently, the economic condition of the country would have been entirely different. It is a great misfortune that men did not understand at that time the importance of such instruction, the necessity there was of developing it, of extending it, of sustaining it; and we are paying dearly to-day for this lack of insight on the part of our governors.

1839 the growing success of the Superior School of Commerce led Adolphe Blanqui to transfer it to the rue Amelot, to the building which it still occupies. He could then undertake certain needed modifications, which were not possible while the school was in the Hotel Sully. The institution was again to go through a period of embarrassment, which, although it did not affect the instruction of the school, nevertheless created great difficulties for its director. Finally after a quarter of a century of persevering and courageous struggle Adolphe Blanqui died prematurely in 1854, at the age of 56 years, without seeing the results of the efforts which his profound faith in the future of economic instruction had led him to undertake.

This École Blanqui, for one can fairly call it so since it had really become his work by virtue of all that he had done for it, was then acquired by M. Gervais de Caen. This able administrator who knew how to improve the financial situation of the school, and make of it a good business venture, said modestly of his own term of office "that it had come like the labors of the last hour, after the greatest heat and the severest labors of the day." He had, therefore, in his own words the

easy merit of contributing to the solidity of the enterprise which had resisted so many storms. He brought to its succor financial resources and the skill of a sound, industrial and commercial administration.

M. Gervais de Caen, who directed the school for thirteen years, that is to say until his death in 1867, gave, at least to the pupils whom he had under his care the future merchants and administrators, an example not to be despised, of a good, well managed business enterprise, thanks to the order and economy of his management showing those positive results which the labor of man ought to produce!

M. Gervais de Caen, moreover, did not apply his habits of industrial and commercial administration in a way prejudical to the instruction of the school. He resolved to maintain the traditions which he had learned in his work with Blanqui. He urged upon the instructing body the loftiness of its mission, demanding of them to take the largest possible part in the incessant progress of science, and of the special aid which it brings each day to commerce and to industry. Having outlived the storms, the Superior School of Commerce certainly achieved under his direction a normal rate of advance, reaching each year, and often times surpassing the figures fixed for its permanent numbers.

Interested in establishing the necessary discipline for the conduct of the studies, which had been very much relaxed under the direction of Adolphe Blanqui, Gervais de Caen has expressed the following opinion resulting from his long experience: first, that one cannot carry on the instruction and education of young men from sixteen to twenty-five years without a personal and constant supervision; second, that in a great city like Paris with young men of this age, belonging almost always to families in easy circumstances, one cannot influence efficiently the day pupils from the double point of view of instruction and education. In consequence, and although they were elements of financial profit M. Gervais de Caen did not hesitate to exclude day pupils from the courses of the school. Nor did he believe in the isolated work in private rooms, and he suppressed this absolutely. This last point of view, which has been enforced since that time in the Superior School, and was later adopted by the School of Higher Commercial Studies, and also the view relating to the exclusion of day pupils and to the necessity of a discipline sufficiently severe to maintain the morals of the resident pupils, have appeared to us worthy of production in this place.

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At his death M. Gervais de Caen, who had no natural heirs, made a will in favor of the daughter of his predecessor. The direction of the school was entrusted provisionally to Aimé-Girard, who for ten years had occupied most brilliantly the chair of chemistry in this establishment. During the last two years of the preceding administration and the two years of the provisional administration which followed, the number of pupils was not maintained—it even sensibly diminished. The only school in Paris where one could pursue commercial studies found it difficult to keep up its numbers; in spite of its brilliant past and its reputation without a rival, it had scarcely seventy pupils in 1869.

It was then that the Paris Chamber of Commerce, always solicitous for the interests of national commerce, was impressed with the situation. Its president, M. Deniére, thinking that such a school would secure a greater prestige in the eyes of merchants if it were patronized by the

chamber, proposed to his colleagues its acquisition. In the session of the twenty-seventh of January 1869 the chamber accepted the proposition of the president, and authorized him to treat with Mademoiselle Blanqui for the purchase of the school, and the hiring of the building which it occupied. The purchase was made at the price of 120,000 francs, and the rent of the buildings was fixed at 25,000 francs per year on the following fifteenth and eighteenth of February. The first task of the Paris Chamber of Commerce was to select a director of the school. It made a choice of one of the professors of the school, M. Schwaeblé, a former pupil of the polytechnic school, thus showing its firm intention of maintaining the traditions of the school and to raise, if possible, the scientific level of commercial studies, which it had just taken under its efficient and lasting protection. The chamber was happy in its choice of M. Schwaeblé as director, who saw the number of its pupils increase from seventy to ninety-two in its first year.

During the unhappy war of 1870 and the insurrection which followed, the courses of the school were suspended. The building changed into a hospital rendered very great services, and the faculty proved that it was equal to the most difficult tasks, and that it knew how to fulfill its duty on every occasion.

As soon as it was at all possible the courses were opened again, and the success of the school went on increasing. The chamber studying the interests of Paris and its commerce, and desiring that the sons of merchants of our city should benefit to a greater extent by the special instruction of this school, decided in 1873 that day pupils, taking a lunch at the school, should be admitted from that time forward. As soon as this decision was made the number of pupils increased, and the figure of 130 was quickly reached, and several times passed. We should like to go into details upon this phase of the school, and its remarkable achievements would furnish us interesting descriptions under more than one head, but we must limit ourselves to absolute essentials.

M. Schwaeblé died in the month of July, 1880, some days after the close of the school year. He had been present at the distribution of the prizes, and he was said to have expressed the wish not to die before the close of the school year.

The Chamber of Commerce had to appoint his successor. A former pupil of the polytechnic school had served it well, and it was again a former pupil of this school which the chamber chose to replace M. Schwaeblé. M. J. Grelley, professor of physics in the school and a friend of M. Schwaeblé, was appointed to succeed him. This choice was not less happy than the preceding one. For no person could have been better prepared for this difficult function than M. Grelley, nor more capable of performing it satisfactorily than he. Formerly a director of an important foundry, initiated into practical affairs, a good accountant, M. Grelley had been long familiar with administrative, industrial and commercial questions. On the other hand, his position in the school which he was called upon to direct, the justness and amenity of his character assured him the devoted aid of his colleagues. Under the excellent direction of M. Grelley, assisted by the counsel of the members of the Chamber of Commerce, and notably of M. Salmon, M. Mignon and M. Piault, the school in the rue Amelot has again seen its reputation steadily increase.

To Sum Up.—The Superior School of Commerce, founded upon an idea, the practical value of which was contested for a long time, has passed through four very different periods in its sixty-five years of existence.

The First Period from 1820 to 1830.—This was the epoch of foundation, of groping in the dark, of administrative mistakes which led to a frequent change of hands and finally to a catastrophe.

The Second Period from 1830 to 1854.—Saved from the ruins; it was protected and defended against all difficulties and all attacks by a powerful personality which instilled new life into it.

The Third Period from 1854 to 1869.—Superior to every individuality but that of the school itself, the management in a certain way impersonal rested upon its early traditions and succeeded in maintaining them and showing substantial advance.

The Fourth Period, from 1869 to the Present.—The apogee of the school—thanks to the support of the Chamber of Commerce, to the constant care of its Council of Administration, to the happy choice of directors, professors and examiners, and finally, to the firmness of discipline, to the excellence of its curriculum of study and the incontestable solidity of its work.

It has not been possible for us to procure the statistics of attendance at the Superior School of Commerce for every year since its organization in 1820, but we believe that the number of six thousand is not an incorrect estimate. There were 1750 pupils from 1872 to 1885, distributed as follows:

1872	100 pupils	1879	135 pupils
1873	105 "	1880	130 "
1874	120 "	1881	120 "
1875	140 "	1882	115 "
1876	140 "	1883	122 "
1877	150 "	1884	115 "
1878	148 "	1885	110 "

This diminution in attendance of late years resulted from the competion of the School of Higher Commercial Studies, which gives essentially the same instruction.

The first department is always the most numerous, and it is, consequently, divided into two sections. The table below shows the average distribution of the students during the last few years:

	Residents.	Half Residents.	Total.
First Class, First Section	22	8	30
First Class, Second "	22	8	30
Second Class	30	10	40
Third Class	16	4	20
Total,	90	30	120

(Foreign pupils constituted on an average, one-fourth to one-third of the attendance; Bachelors on an average, one-twelfth.)

The school has received half residents, or day pupils, only since 1873. Of 1650 pupils since 1873, 498 were day pupils, an average of thirty-five per year.

CHAPTER II.

SUBSIDIES; SCHOLARSHIPS; INTERNAL REGULATIONS OF THE SCHOOL.

Subsidy.—The Superior School of Commerce has never received any subsidy.

Scholarships.—In 1838 M. Cunin-Gridaine, at that time Minister of Commerce, desired on one occasion to visit the final examinations of the school to form for himself an idea of the value of the work done there. Being well convinced of the excellence of the instruction, he conceived the thought of assisting each year a certain number of poor youth, and established some half scholarships, which were open to competition. This was the first evidence of interest shown by the government in commercial instruction. Fifteen years later, on the eighth of June, 1853, M. Magne converted the half scholarships into entire scholarships. To-day, the State supports twelve scholarships for pupils who pass two years in the Superior School of Commerce. In consequence, at the end of each school year, about the fifteenth of July, six vacant scholarships are open for competition at Paris, Lyons, Marseilles, Toulouse, Bordeaux, Rouen, Nantes, Nancy, Lille and Dijon.

The sum granted by the Ministry of Commerce for the aid of pupils, not having varied since 1853, is to-day considerably below the sum which they actually cost the school. The latter accepts the situation, however, without complaining, for it finds a sufficient compensation for the loss which it sustains in the fact that these scholarships being open to competition, and the regulations under which they are given being administered with absolute impartiality, they are, with very rare exceptions, always held by good pupils.

Conditions of Admission to the Competitive Examination.—No one can be admitted to the competitive examination unless he shall have shown that he is of French birth; that he is at least sixteen years of age, and not more than twenty, on the first of October of the year in which the examination occurs. No dispensation from this provision is allowed.

The candidates who fulfill these conditions must register between the first and fifteenth of July, at the latest, at the prefecture of the department in which they desire to pass the examination. They must submit certificates at that time relating to the birth of the candidate—a certificate of the formalities prescribed by law—a certificate of vaccination, and a written declaration indicating the city in which the candidate wishes to be examined, also detailed information as to the financial condition, the number of children and other charges of the parents, as well as an abstract of the taxes paid by the parents.

Examinations.—The examination consists entirely of written compositions, the subjects of which are taken from the course of study indicated below (the course of the first year), and sent to the prefecture of the Ministry of Commerce in sealed envelopes. The examination of the essays, and the classification of the candidates are reported to the Ministry of Commerce by a commission appointed for this purpose.

The compositions comprise: First, a dictation intended to show that the candidate can write French correctly; second, an historical or geographical topic; third, a test in accounting; fourth, an exercise in arithmetic; fifth, elementary questions in physics or chemistry; sixth, an English or

German theme; seventh, an elementary original design in black crayon. (An hour and a half is allowed for each subject.)

Regulations of the School.—The school receives resident and day pupils, lunching in the dining hall, provided they are at least fifteen years of age. No pupil can be admitted to the courses of the second year until he shall have completed his sixteenth year. Admission into this division is allowed only after an examination; bachelors in science, and bachelors of special secondary instruction are excused from this examination. The yearly price of board, tuition and lodging is fixed at 2000 francs for resident pupils who are present at the opening of the year, which takes place the first Monday in October. Pupils who remain at the school during the long vacation (from the thirty-first of August to the thirtieth of September) pay a sum, based on the yearly price, of 200 francs per month. Special lessons carried on without interruption during the months of August and September, prepare the new pupils, and the pupils who have fallen behind, for the courses of the following year. The pupils do not wear uniforms. They can have a private room by paying a supplementary fee of 100 francs per term. In return for an annual subscription of 100 francs, the pupils receive lessons in gymnastics, fencing, dancing, riding and boxing. This subscription is obligatory for all resident pupils.

Day Pupils.—The day pupils lunch at the school. They attend the courses from half-past eight in the morning until five o'clock in the evening, in accordance with the program of studies.

The price for the day pupils is fixed at 1000 francs per year for the pupils who are present at the beginning of the year. The pupils who follow the courses of the school during the long vacation pay a fee of 100 francs for the two months; they do not, however, receive lunch during this period. The day pupils can also profit by the various lessons in gymnastics, etc., by a payment of 100 francs a year. The pupils of all divisions, under the guidance of the management of the school and in accordance with the instructions of their family, attend the different religious denominations to which they belong.

CHAPTER III.

INSTRUCTION; DIVISION OF STUDIES; PROGRAM; EMPLOYMENT OF TIME; EXCURSIONS.

First Class.—The Superior School of Commerce is divided into three divisions or offices. The entire course of study lasts three years.

The first office (first year) is, properly speaking, only a preparatory year for the more special studies of the following years. This first class is always more numerous (on an average sixty pupils), and is for this reason divided into two sections. The second section, which is preparatory to the first, comprises the most backward pupils.

The first year is given to the improvement of penmanship, study of history; geography; arithmetic; and an elementary course upon the usages of commerce; primary notions of bookkeeping; also physics and chemistry, in which the students study the elements, vocabulary, nomenclature and classification; further, the elements of ordinary legislation and of drawing. Pupils commence in this year the study of foreign languages.

Foreigners study the French language, and French pupils perfect themselves in the more detailed study of the rules of their own language.

The division of labor, as shown by the detailed program*, implied in a certain way the necessity for the first organizers of this instruction to fix a minimum age for entrance. Intelligence and the memory suffice for certain studies; but the study of science demands power of attention, reflection and judgment. In a word, the epoch of their development cannot be arbitrarily advanced any more than the development of the brain itself. The minimum age of entrance for pupils to the Superior School of Commerce was accordingly fixed at fifteen years for the first class, and the school, as a result of its experience, would be rather inclined to lower than raise this age limit.

Second Office or Year.—The second office does not receive pupils under sixteen, as we have said. This provision has been maintained, though not without creating each year new difficulties. The pupils in general have a marked desire to enter upon the second year immediately, without troubling themselves as to whether they are in a condition to profit by the courses. It is for them and too often for their parents a question of *amour-propre.*

The various directors of the Superior School of Commerce have found themselves invariably face to face with the difficulty of making those who come forth from the factories of baccalaureates understand that the science of commerce is not composed of certain formulas which it is sufficient to remember in order to be well prepared to make an excellent merchant. These young people are astonished that they must work seriously and for a long time in order to learn that which seems to them so simple *a priori.* They would often like to arrive at the advanced parts of science at the very beginning; to occupy themselves with finances, with the large enterprises of the merchant, with the complicated operations of the exchange, etc. In a word, they would like to begin at the end, and to begin with that which can only be the complement of serious studies, leading the pupils by degrees to the possession of a positive knowledge which initiates them into the life of affairs, It is easy to see, therefore, that one was obliged to fix a limit of age for entrance into the second year, and to institute an examination which all pupils who would enter it directly must pass, with the exception of bachelors of science and bachelors of special secondary instruction.

The courses pursued in the second office, as the detailed program shows, comprise the continuation of some of the preceding studies: Essays relative to commercial correspondence; the application of arithmetic and algebra to all the operations of commerce and banking; theoretical and practical accounting in its various branches; commercial geography and the history of commerce; the study of the commercial code of fiscal and tariff legislation; of commercial statistics; of chemistry as applied to industry and commerce; of physics; of raw materials and commercial products, specimens of which are to be found in the museum belonging to the school, and, finally, drawing and stenography.†

Program of the Course of Study in the Third Year.—The third office (third year) is devoted to superior instruction. This instruction, to which

* For program of first year see Syllabus of Courses in the School for Higher Commercial Studies which are essentially the same as in the Superior School of Commerce, also table on page 64.

† For program of second year consult Syllabus of Courses in School of Higher Commercial Studies (first year of the regular course); also table on page 64.

no pupil is admitted without having passed one year in the second office, comprises besides a review of the preceding studies, exchange and arbitrage; the mechanism of the operations of commerce; the multiform applications of accounting to industry, banking and commerce; the questions of insurance which necessitate the calculation of probabilities; chemistry as applied to the study of merchandise and the detection of adulterations; elements of mechanics as applied to the wants of commerce and industry, to the equipment of trade ports, to that of railroads, docks, etc.; technology or the description of the leading industries, applied physics, commercial and maritime law; political economy; commercial history; the continuation of geometry and drawing, and finally, foreign languages, of which speaking knowledge is required as far as possible. A good pupil of the third year on graduation is supposed not only to understand German, English and Italian or Spanish, but also to correspond in three of these languages. A few very bright ones—they are rarely French pupils—get so far as to be able to make themselves understood in speaking. The language courses in the third office are carried on exclusively in the language studied. In the office where the courses of technology and raw materials have an exceptional importance, one applies the studies by means of an imitation of the real transactions of commerce; each pupil opens and closes accounts of all sorts, he buys and sells merchandise according to the course of the day, carries on a bank, dispatches ships, corresponds in foreign languages, devotes himself, in a word, under the direction of an experienced professor, to the most difficult and varied operations of commerce.*

Such a plan as the above needs no commentary. We have not hesitated to produce it entire in order to show that commercial instruction is not, as its detractors pretend, or those who are ignorant of it maintain, a narrow instruction "of the earth, earthy;" an instruction of the shop, but it is in reality a scientific instruction at once general and special directed toward the positive studies which are of use to young men who intend to play a rôle in commercial, industrial, administrative or consular careers.

But if the program speaks for itself, it will not be superfluous for us to call attention to how much devotion, intelligence, experience in practical affairs and in education have been necessary since the origin of this school to create, organize, improve and make this program, in its entirety, to constitute that which one has called "the science of commerce," especially when one considers the difficulty of finding instructors who knew how to put together the materials in which it was their business to instruct, for the purpose of their particular training, and in which variety was not to exclude the unity of view.

It would not have been sufficient for the professors to be merely learned, as those in the colleges and lycées; it was necessary for their lectures to bear the seal of experience, for the most of them to have been initiated into the life of affairs, for them to live or to have lived for a certain length of time face to face with practical difficulties arising with every step, and which it was necessary to solve immediately. It was only from such men that one could demand that they should give young men a training which should lead directly to the practice of commerce.

* For program of third year, consult Syllabus of Courses in the School of Higher Commercial Studies, (second year of the regular course); also table on page 64.

To maintain the traditions of useful education while raising its level to the height of progress realized in science and its applications; such, in brief, was the work of the various managements which have succeeded one another at the Superior School of Commerce, and this was a work of no small merit.

Distribution of the Time.—The working day is divided for the resident pupils in the different offices as follows: Lecture and recitations, six hours; study, four hours; recreation, five hours; repose, nine hours; total, twenty-four hours.

There is thus an average of sixty hours of labor per week, including the study hours in the office. The day is thus divided: From 5.30 to 6 o'clock, rising and making the toilet in dormitories; from 6 to 8 o'clock, study in the offices; from 8 to 8.30 o'clock, first breakfast and recreation; from 8.30 to 10 o'clock, lessons; from 10 to 11 o'clock, lessons; from 11 to 12.30 o'clock, second breakfast and recreation; from 12.30 to 2 o'clock, lessons; from 2 to 2.30 o'clock, recreation; from 3 to 4 o'clock, lessons; from 4 to 5 o'clock, lessons; from 5 to 7 o'clock, dinner and recreation; from 7 to 9 o'clock, study in the offices.

DISTRIBUTION OF STUDIES IN THE OFFICES.

	Hours per Week for Each Course.			
SUBJECTS.	First Office. Second Section.	Second Office. First Section.	Second Office.	Third Office.
French	9	4½	2	
Mathematics	4½	4½	3½	3
Accounting	3	3	3½	3
Penmanship	2	2	2½	1
Commercial Correspondence		1	1	
Physical Geography	2½	2		
Commercial Geography			3	3
History	2	2½		
Commercial History			1½	1½
Physics	1½	1½	1	1½
Chemistry	1½	3	1½	1½
Mechanics				1
Natural History		1		
Raw Materials			1½	2
Technology				1
Commercial Law	1	1	1	1½
Fiscal Legislation			1	
Political Economy				1½
Drawing	3	3	3	3
Stenography			1	
German	3	4	4	3½
English	3	3	3	2½
Spanish			1	1
Italian			1	1
Industrial Visits				3½
Total,	36	36	36	36

The courses in each of the three offices are entrusted to a special professor. Each pupil must be present at all the courses of the office to which he belongs. The pupils take notes during the lectures of the professor, then study these notes in the offices and consult the books at their disposal; write up their notes carefully, which are then collected by the inspector to be submitted to the professor.

We have estimated that the pupils in the first office have a total of 900 lessons in the course of the school year; those of the second, 911; those

of the third, 1002, independent of the lessons in accomplishments, such as dancing, fencing, etc.

Commercial and Industrial Excursions.—Just as industrial instruction can only gain by becoming commercial, so commercial instruction strengthens itself by becoming industrial, consequently, the courses in industrial mechanics, technology and raw materials assume considerable importance in the third office, and in order to re-enforce the theoretical descriptions of the things which they have studied, the pupils in this office make frequent visits, under the conduct of an inspector, to the principal establishments of Paris and its environs. These visits are the themes of reports which the pupils make to their director upon each of these industries; reports which require careful supplementary studies in technical works in order to complete the notes which they have taken on the spot. It is evident that these weekly lessons, and the studies by which they are followed, train in an excellent way the observation and judgment of the pupil, by developing at the same time his theoretical and practical knowledge.

The Chamber of Commerce, always in pursuit of better things, has judged, however, that these Thursday excursions were not sufficient for the purpose. Certain industries, and, indeed, some of them very important, are not represented in the environs of Paris at all, notably the extractive and textile industries. The chamber consequently decided that each year, beginning with 1875, the pupils of the third office should make a commercial trip, in the month of April, under the conduct of the director of the school. The expenses of this trip, which amount to about 200 francs, must be defrayed by the pupils. This trip lasts about three weeks. They go ordinarily into the north of France and into Belgium, where the students study the principal factories of cotton and wool; the important coal mines, furnaces, etc. As soon as they have returned to the school, the pupils prepare a detailed account of their trip, which must be submitted on a given day to the director. These reports are in general very carefully prepared. The Chamber of Commerce in establishing these industrial trips decided at the same time to grant to the author of the best memoir, under the name of "Traveling Scholarship," the sum of 1000 francs, which could be utilized in making a trip either in France or in a foreign country for the purpose of studying some questions proposed to him by the Administrative Council of the school. We have examined several of these essays, which were printed on account of their merit, and each of which reveals truly remarkable qualities of style, of method and of scientific and economic observation. They give marked evidence of the solid character and excellence of the studies pursued by the young men who wrote them. The titles of a few of them follow: First, a report upon the cotton trade of England; second, a report upon the iron and steel trade in Great Britain; third, a report upon the trade and manufacture of linens in the British Isles; fourth, a report upon the trade and manufacture of woolens in Hamburg, Antwerp, London and Havre; fifth, a report upon the coal trade in the north of France, Belgium and England; sixth, a report upon the manufacture and trade in sugar; seventh, a report upon the silk trade and factories in France, Italy and Switzerland.

CHAPTER IV.

VARIOUS EXAMINATIONS.

Special examiners test each day a certain number of the pupils in the three offices upon the principal branches of instruction. General examinations are held every three months for the classification of the pupils, and immediately thereafter an abstract of the marks which each pupil has received for his conduct and his work is sent to the parents. Reports are, moreover, sent each month to the parents.

Final Examinations.—The final examinations are, in general, conducted by well-known men, such as Levasseur and Frederic Passy, members of the institute; Alfred Blanche, former councillor of the State; Dr. Gariel, general engineer of roads and bridges and member of the Academy of Medicine; M. Le Coeuvre, professor at the Central School, etc.

The pupils are examined separately in the presence of the professor of the subject to which the examination relates. Each examiner has generally to test one-twentieth of the pupils; he employs for this purpose about a day, from which it may be seen that the examinations are taken in earnest.

The relative importance of each subject of instruction is determined by a co-efficient by which the mark given by the examiner is to be multiplied. The products obtained for the different subjects are then added together, and the pupils are classified according to the number of points. Those who have obtained a sum total corresponding to the average mark of 12 on the scale of 20 receive a diploma printed on parchment, signed by the Minister of Commerce. The average mark of 12 is not easy to obtain as many examiners mark very low.

To give an idea of the importance attached to each subject, we reproduce a table which served to determine the classification of a pupil who obtained the first diploma in 1884.

The number of points necessary to be obtained for this diploma was 2568, which corresponded to the average mark of 12, that is to say that it is equal to the product of 12 by the sum of the co-efficient 214. It was the first time, we believe, that the average mark of 1881 had been reached.

SUBJECT.	Mark.	Co-efficient.	Product.
German	18*	18	324
English	16	16	256
Arithmetic and Algebra	19	20	380
Industrial Chemistry	18	14	252
Accounting	19	18	342
Drawing	—	—	—
Commercial Law	20	16	320
Political Economy	20	14	280
Penmanship	—	—	—
Spanish or Italian	20	12	240
Commercial Geography	18.25	18	328.50
Commercial History	20	14	280
Raw Materials	19	16	304
Mechanics	16	10	160
Applied Physics	20	12	240
Technology	20	16	320

Total, 4026.50; general average, 18.8111.

*See table at top of p. 67.

Signification of marks from zero to 20 as follows:

Zero (°)	failure.	9, 10, 11	passable.
1, 2	very bad.	12, 13, 14	fair.
3, 4, 5	bad.	15, 16, 17	good.
6, 7, 8	mediocre.	18, 19	very good.
20	perfect.		

CHAPTER IV.

VARIOUS REWARDS; MEANS OF DISCIPLINE; DIPLOMAS; CERTIFICATES; MEDALS.

Diplomas.—Pupils of the third office who have completed their studies and passed with success the final examinations before the Council of the school, receive at the time of the distribution of the prizes a diploma of capacity, furnished by the school and signed by the Minister of Commerce, president of the Council. Only good pupils pursue their studies through the third office, and their number amounts to from sixteen to twenty on the average. The number of pupils receiving diplomas is naturally smaller. The table below shows the number of graduates since 1869:

1869 15	1873-74 13	1877-78 19	1881-82 10
1870-71 . . 9	1874-75 16	1878-79 20	1882-83 14
1871-72 . . 8	1875-76 18	1879-80 19	1883-84 14
1872-73 . . 17	1876-77 17	1880-81 13	1884-85 11

Being a total of 233 graduates out of a total of 288 candidates.

Certificates.—The pupils of the third office who are not able to obtain a diploma receive a certificate of studies, signed by the president of the Chamber of Commerce. These are the only certificates which the school recognizes as official; both certify the completion of the course; partial certificates are not given.

Medals.—A certain number of medals are given as prizes each year to the pupils of the various offices by the Ministry of Commerce; the Chamber of Commerce; the Association of Commercial Geography, and the Alumni Association of the School. The medals are in gold, silver and bronze for the third office; and in silver and bronze for the second and first offices. One of the prizes given by the Chamber of Commerce consists of a traveling scholarship of 1000 francs, of which we have already spoken under the heading "scholarships." Besides these prizes the "Stenographic Institute of the Two Worlds" gives special diplomas to those pupils who are most distinguished in the study of stenography.

General Discipline.—The general regulations of the school are very precise; they are not severe but they are observed with care and firmness. Even the form testifies to experience acquired in the long history of the school; we may mention prohibition of reading works relating to other than the subject of studies, card playing, etc.

The pupils who have obtained permission to be out must return by ten o'clock in the evening during the winter, and half-past ten during the summer. They present for the signature of the inspector an *exeat*, upon which they indicate the name and residence of the persons whom they wish to visit, as well as the hour of arriving and departing; this *exeat* must be signed by the parents or correspondents. A note is made of the

exact hour of departure and the hour of return of each pupil on each occasion that he leaves the building. No students are permitted to leave the building during the working hours. Pupils who do not return at the hour prescribed are punished in the following way: For a tardiness of from five to ten minutes a half demerit; from fifteen to thirty minutes an entire demerit. The pupil besides this is deprived of a certain number of possible freedoms, and can even be expelled. The conversation room is open to persons authorized to visit the pupils every day from eleven in the morning until half-past twelve; in the afternoon from two to half-past two; and from five to seven in the evening. Pupils cannot be visited except in the conversation room.

There are also special rules for the studies; the various branches of work; the movements within the building; the policing of dormitories and other parts of the building to which the pupils must conform. In the regulations in regard to classes, we notice that every pupil dismissed from the room of a professor is given an entire demerit, and the general regulations say that formal refusal to obey incurs immediate suspension from the school. The pupils receive special blank-books for the taking of notes. These blank-books are inspected at each recitation by the professors and their assistants; the pupils write up these notes for certain courses. All bad work must be re-written on Sunday. Any neglect of work is followed by a corresponding punishment. During the term examinations every pupil caught in copying any paper is marked and excluded from competition in the general classification. Under the regulations relating to studies we notice further some wise provisions whose rigid enforcement develops good work on the part of the resident pupils, and assures very marked superiority over the day pupils, whose work suffers in general from the too great freedom which is allowed them outside of the school.

In the regulations concerning dormitories, we note that at half-past five in the morning a bell is rung once, as a signal for the pupils to rise; at six o'clock they report themselves for study, and every pupil coming in late incurs a punishment. They retire at nine o'clock in the evening.

The Superior School of Commerce prescribes, therefore, for its resident pupils what would be for a workingman a real day's labor. To the credit of the resident pupils it should be noted that the gold medals, the great prizes, the traveling scholarships, are almost always taken by resident pupils.

The regulations of the dining-hall say, that at the sound of the bell which announces lunch or dinner, the pupils must come into the refectory, marching two by two, in the order of the places which they occupy. Each master conducts the pupils of his office. During the meal the inspector exercises a general supervision.

The regulations in regard to study prescribe that each student while remaining in his chamber is forbidden to smoke, or to read works not relating to his studies. The regulations concerning recreation say that pupils may remain in the office or may go into the library. They are called in turn and by groups to the gymnasium, to the dancing, fencing and riding halls. The failure to appear in one's place incurs a punishment. Singing, yelling, whistling and shouting are forbidden, and we know from the people who reside near the school that the conduct of the pupils in this respect is good. We may add that the supervision of the

school is entrusted to five supervising masters, an under-inspector and an inspector, whose intelligent and devoted assistance aid the director in the firm, fatherly application of these various rules.

Penalties.—The punishments which may be inflicted upon pupils are: half-demerits; demerits and suspension from the school. The director and inspector are alone authorized to inflict punishments, upon the demand of the professors or supervising masters. The notebooks of the offices and the courses; the reports of conduct, with the special notes of the inspector, are submitted each evening to the eyes of the director, and give him, combined with the frequent visits in the various offices where he teaches himself, a complete knowledge of each pupil, whom he may thus guide according to his peculiarities and needs.

CHAPTER V.

ADMINISTRATION; RECEIPTS; EXPENSES.

The Superior School of Commerce is administered, as we have already said, by the Paris Chamber of Commerce, which delegates its powers to the Council of Administration, the actual composition of which is given below: President, Jules Piault; Administrators, Fortier-Beaulieu, Jarlaud, Magnier, Mignon, Salmon, Weber; Director of the School, J. Grelley.

Financial Condition of the School.—Thanks to the experience, intelligence and the constant efforts employed by the members of its Council of Administration and by the management, the Superior School of Commerce, famous for the solid character of the studies which are there pursued, as well as by its exemplary discipline and the comfort enjoyed by the pupils, is in an excellent financial condition.

Without entering into too great detail it will be sufficient to note that the Paris Chamber of Commerce purchased the clientele and the furniture of the school for the sum of 120,000 francs, in 1869, though it has expended since that time almost 100,000 francs on buildings, and, that not only has the school always paid its way, but it has extinguished the greater portion of the original outlay, while paying an annual rental of 25,000 francs to the owner of the property and not ceasing to give excellent accommodations to its resident and day pupils.

The budget of the school for 1886 is given below. This budget, which does not present any notable differences from those of the preceding years will suffice for the purpose:

RECEIPTS.	
From term fees of pupils	230,000 francs.
EXPENSES.	
Cost of Administration	42,000 francs.
Salaries of Professors	45,000 "
Food	70,000 "
Heating and Lighting	8,500 "
Annual Rental	25,000 "
Laundry	6,000 "
Advertising	3,000 "
Maintenance and Repairs	8,000 "
Taxes	600 "
Payments on Indebtedness	12,400 "
Various Costs	9,500 "
Total	230,000 "

CHAPTER VI.

PERSONNEL OF THE SCHOOL.

The personnel of the Superior School of Commerce is composed of professors, examiners, physician and instructors, including altogether some seventy persons. Such men as Levasseur, Passy, Le Coeuvre figure in the list of examiners.

CHAPTER VII.

GENERAL CONSIDERATIONS.

If we cast a last glance upon the Superior School of Commerce, we shall see that this useful institution, which has served as a model not only for France but for foreign countries, as well, has never ceased to progress, without, however, leaving the line which was traced for it at the very beginning by men skilled in practical affairs, celebrated for their scientific labors, and who knew how to recognize the need of special instruction for youth destined for the commercial career. It is not unimportant to note in this connection that this school, due to the initiative of MM. Brodard and Legret, the School Blanqui, the School Gervais de Caen, the School of the Chamber of Commerce, directed by polytechnicians, has never varied from its commercial origin. It has remained a school of commerce, reserved for the preparation of superior employes, of trained merchants, of bankers, of managers, of commercial directors for industrial establishments, etc. The school has constantly endeavored in its career, with a perseverance and unity of view, worthy of remark, to unite general and special instruction, to bind them one to the other in such a way as to constitute a homogeneous whole at once classic and scientific, whose parts should mutually assist and complement each other, whose distinct courses should be definitely related the one to the other, and form a whole like the various chapters of a book, the whole, of course, remaining always improvable.

One fact which proves the intimate and systematic connection of the courses is, that those pupils who come out of the first office are ordinarily better prepared and do their work in a better way than those, who, pressed by lack of time or by age, enter immediately the second course. One can easily understand that to follow with advantage the lessons of the two higher offices, there is no better preparation than that of the school itself. for the reason that its programs of instruction are combined into a single whole for the three years, of which the first parts are visibly and strongly attached to those which follow.

It is in the second office that the instruction, without ceasing to be general, becomes more special by the courses which relate directly to commerce. Besides this, in the second office the pupils while carrying on the study of our own language perfect themselves in the study of German and English and choose one of the southern languages, Italian or Spanish, in such a way as to learn finally three foreign languages. This study of foreign languages (a subject to which one has certainly up to the present not given the attention which it deserves either in schools of commerce or other schools), is facilitated in this school of the rue Amelot, which is in

a certain sense international in character, by the number of foreign pupils who daily assist the work of the professors by their conversations with their French comrades.

It is in the second office that the mathematical spirit, which must be at the basis of every calculation, commences to develop. Here reason takes the place of empirical methods, which tend to arrest the development of intelligence, and the pupils treat all the questions which are submitted to them in a rational way. Advancing further, the professor must exercise them in the practice of rapid calculation and of mental calculation, whose utility in business is incontestable. The mathematical courses are excellently given at the Superior School of Commerce. What an excellent book MM. Brasilier, Margerie or Grelley could make upon financial and commercial mathematics!

Mathematics and accounting, the pencil and the pen, complement each the other. The course in accounting advances in the second office from elementary work to practice. Here one applies the principles of accounting to commerce, to industry and to banking. The professor instructs in the different usages of cities and markets; his course becomes a course in commerce, correspondence is carried on in several languages. Then there is commercial geography, a science, so to speak, entirely modern, and yet of the first importance in economic instruction.

Parallel with these, the students learn in the course on the history of commerce, how under the vigorous and fruitful influences of commerce, the natural resources; the intellectual wealth of the nations; their political existence, etc., arise and grow. At the same time that they are studying the facts in which the commercial prosperity shows itself at different epochs and at different countries, the pupils have under their eyes, in the beautiful museum of commercial products, the natural products which are the bases of human exchanges, and the manufactured products which support these exchanges. In a word, it is by the combination of theoretical and practical lessons that they study the progress of commerce and of industry, that they follow its various stages from the earliest times down to the present; in a word, that they learn to know the economic evolution of humanity.

But the young merchant must have a just notion of his commercial duties and his commercial rights. He must also be instructed in the various taxes which are levied on merchandise, on exportations and importations; he must understand the mechanism of the tariff; he must be acquainted with our treaties of commerce with the great nations; finally, he cannot afford to be ignorant of the organization of our system of taxes. He must understand their purpose, their necessity, their method of assessment and distribution. The courses in commercial and maritime law, supplemented by those in fiscal and tariff legislation, commercial statistics, etc., fill this gap in his education, and present him admirably well prepared for the course in political economy which begins in the third office, and is the philosophic crown of the commercial sciences taught in the school.

In this body of useful knowledge the physical and natural sciences have also found a place and an application. Indeed, how could one give a good course in raw materials without basing it upon courses in natural history, physics and chemistry? In the same way, would not a course in technology require a course in industrial mechanics, if it is to be at once

intelligible and fruitful? All these branches of instruction are closely related, and their practical administration must be preceded by theoretical studies. Moreover, *noblesse oblige*, one cannot limit one's self in a superior school to the examination, pure and simple, of raw materials and commercial products. And then from merely practical considerations one must teach the pupils in the second and third offices the chemical compositions of the leading substances, the physical conditions under which they are produced, and the mechanical principles employed in their various transformations. The merchant of to-day, like the manufacturer, must become acquainted with the scientific methods which clear his judgment, develop his intelligence and prepare him finally to discover adulterations either in raw materials or manufactured products. This scientific part of the instruction of the school is reinforced in the third office by the commercial and industrial visits made every Thursday to the establishments of Paris and its environs, as well as by the annual trip to the north of France and Belgium, where all the leading industries are studied, under the experienced guidance of the director.

Conclusion.—To determine upon the different courses of study, to arrange the programs of these studies, to improve them without ceasing by watching over their intelligent development in the classes, by choosing skilled professors adapted to the methods of instruction and by maintaining with a firm hand the necessary discipline in every direction; all this is without doubt important. But this alone would be insufficient to realize the ideas of the Paris Chamber of Commerce and to preserve the ancient traditions of the sort of a school which we have been discussing. Following a more elevated purpose than even this, the object of this school has always been not merely the creation of a scientific body of commercial instruction, but that of an economic education, based upon moral principles. "Get rich" is a motto which needs numerous corrections. A merchant must be twice honest; honest as a citizen, and honest by profession. If nothing is more difficult in the world than to get money, nothing is easier than to lose that which one has gained without labor. Fortunes which grow too rapidly disappear of themselves. Those which are the result of patient labor and honesty are less exposed to adversity, because their possessors, more prudent, guard them more carefully from danger.

We find the motto of this school summed up in the simple words: "Be Good, be Laborious, be Persevering," pronounced by M. Gustave Roy, then president of the Chamber of Commerce, on an occasion of distributing the prizes of the school.

"Perseverance," he added, "is indispensable to him who wishes to advance. Set before yourself a clear, well-defined end, let nothing turn you from it. Be honest, be led on every occasion by that inward light which is called 'conscience.' Consult it, and when you ask it, if it hesitates, abstain. For in all which is right, loyal and honest it will never, believe me, show any hesitation. In regulating your lives in this way you will find your reward in the confidence, the consideration, and the credit which you will inspire. A merchant should be honest from calculation, if not from the sense of duty."

To these counsels, full of wisdom; to these words marked with the seal of experience, M. Grelley, director of the school, added the following:

"A condition essential to success in business, I do not fear to say it, is ambition. The merchant or the manufacturer, who desires only a

modest subsistence, lacks energy, lacks the great fire necessary to success. In this age of steam and electricity there is no place for the indolent. Success is for those who, to the two essential qualities of order and economy, add the love of labor, and the firm resolution to succeed." And he added in words not less excellent, "I would warn you against a fault unhappily too common with young people who are just starting out in life. Many people have what I should call a 'clerical' character; they arrive in the morning at their labor: do exactly that which they are directed to do; and wait patiently for that which they call the hour of 'liberty' when evening comes. For these there is no such thing as success; they will remain employes throughout their lives. The employe who wishes to succeed must devote himself without ceasing to the affairs which are entrusted to him; he must treat them as his own; he must go before the hour of beginning work, and finish up in the evening that which he has not been able to do in the day time. This sort of a man is sure to succeed, if he adds to these qualities order and economy."

Commerce oblige is then the motto of this school. Honesty is a real force like order, economy and persevering labor.

The commerce of France can only increase by the study and practice of probity, and it is through such a school as this that such ideas will pass into commercial life, and that an experimental demonstration will be made that probity is synonymous with skill and success.

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To sum up the characteristics of the Superior School of Commerce: It has based commercial instruction upon solid scientific instruction. From this point of view the programs of this school are the most complete of any which we have had the pleasure of seeing. A great part of the problem of commercial instruction appears then to us to have been solved at the Superior School of Commerce at Paris, which has had the honor of training, since its foundation, more than six thousand financiers, manufacturers, superior employes, etc., scattered throughout all the countries of the world, and among whom we could name a large number of eminent men in various departments.

CHAPTER IX.

THE ALUMNI ASSOCIATION OF THE SUPERIOR SCHOOL OF COMMERCE.

Origin.—Various graduates of the Superior School of Commerce have attempted from time to time to create an association among the alumni of this ancient school. But it was very difficult to reknit the broken threads among the members of so many generations, who had experienced so many different fortunes, and were scattered, since the foundation of the school in 1820, throughout the entire commercial world.

In 1872, a year which witnessed the rise of an extremely favorable movement to schools of commerce, the students of the third office finally succeeded in forming a society. Guided by certain former graduates, among whom was the eminent economist, Joseph Garnier, and aided by the counsel of their first president, M. Paul Lafitte, they succeeded in creating a society the utility of whose work we are just beginning to appreciate.

Services and Progress.—The association, founded by seventeen members, includes to-day more than six hundred and fifty members. The following table shows the annual increase:

1872	77 members	1879	470 members
1873	225 "	1880	499 "
1874	288 "	1881	520 "
1875	316 "	1882	575 "
1876	365 "	1883	594 "
1877	414 "	1884	616 "
1878	454 "	1885	633 "

The original association has not undergone any notable change, but each year has marked, so to speak, a stage in the moral development of the society. The purpose of the union is: First, to cultivate the friendly relations formed at the school; second, to utilize the relations thus created for the development of commerce and industry; third, to aid former pupils by assisting them after graduation and facilitating their finding of positions; fourth, to assist unfortunate comrades. The former pupils of the school and pupils in the third office may be members of the union. The annual fee is ten francs; one may become a life member by paying at one time the sum of 100 francs. The title of "donor" is given to those who pay 200 francs at one time.

The management is composed of twelve graduate members and one member from the third office. It regulates the disposition of the funds; decides upon requests for assistance; and supervises the publications of the society. From the first year of its organization the union has granted an annual prize in political economy for the best pupil in each subject.

At its instigation a traveling scholarship was founded by the Paris Chamber of Commerce, and given to a graduate of the third year.

The union also names corresponding members at important points in various parts of the earth, for the purpose of gathering commercial information. These correspondents also serve as patrons to those members of the society who have newly come to their respective places.

In 1876 a quarterly *Bulletin* was established, which soon became very prosperous, and furnished to the members of the society interesting papers upon economic subjects, as well as upon facts relating to the society. This publication has recently become a monthly. The society has published, besides, a year book, since it was founded. By the publication of its *Bulletin* the union has established connections with various learned and commercial societies, notably the Geographical Society; the Society of Geographical Commerce at Paris; the Scientific Society of France; the Alumni Society of the School of Arts and Metiers.

The banquet, established at the beginning of the society, assembles each year the most devoted members of the union. In 1882 its president, N. Detre, invited the presidents of similar societies in Lyons, Rouen and Havre, founded upon the model of that of Paris, to take part in the annual banquet of the union in Paris, or to send delegates. It was decided at this banquet to organize a syndicate of the Alumni Society of the Superior Schools of Commerce in France, which furnishes a new proof that there is utility beyond the commercial in such societies.

The presidency of the Syndicate of the Alumni Society is vested in the president of the Paris Union. It was in this double capacity that M. Deligny submitted in March, 1884, the demand for a new syndical grouping

Accompanied by M. Pathier, a former president, and M. René Le Roy, vice president of the union, M. Deligny was called to testify before a Parliamentary Investigating Committee, consisting of forty-four members. He insisted strongly upon the necessity of giving to commercial instruction equal advantages to those governmental schools which are endowed by the government.

Representations were also made to the Ministry of Marine to obtain traveling scholarships under the same conditions as the society for the encouragement of commerce and industry, and M. Deligny received a formal promise that the State would subscribe a sum equal to that which should be subscribed for this purpose by the societies interested.

In February, 1885, M. Rouvier, Minister of Commerce, accepted the presidency of the banquet of the union, and promised his high assistance to the various purposes pursued by the syndicate.

Among the numerous evidences of the activity of this Alumni Society we cite further the foundation of the Conference Adolph Blanqui, a society for commercial and industrial study, whose purpose is to develop among the future graduates the taste for further study and the verbal discussion of questions relating to commerce and industry.

The Tribunal of Paris appreciating the good purpose of the Conference Blanqui offered it a place of meeting, which the Alumni Society did not hesitate to accept on behalf of the conference.

Faithful to its purpose and full of solicitude for its members, the society assists them, aids them, either in their search for positions or in their commercial careers, by means of the numerous relations which are maintained through the various reunions, by the publication of its *Annual* and by its *Bulletin*, and, finally, if misfortune overtakes one of its members, the society is always on hand. Moreover, the last word in regard to this brotherly side of the society has not been said. M. Deligny proposed the organization of a circle which should increase still more the development of friendly and commercial relations, and M. Detre then proposed more material reunions for the same purpose.

The publication of the *Bulletin*, as stated above, has just become a monthly. Finally, we may say that M. René Le Roy, the present president of the society, has submitted to the management a scheme already carried out in part; to form a sort of benefit treasury in favor of comrades who are momentarily embarrassed in their business affairs.

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2. THE SCHOOL OF HIGHER COMMERCIAL STUDIES IN PARIS.

CHAPTER I.

HISTORY OF THE FOUNDATION OF THE SCHOOL AND ITS SUBSEQUENT DEVELOPMENT.

The first idea of the creation of this school should be ascribed to the Paris Chamber of Commerce, which as early as 1866 took up the question of organizing an establishment of Higher Commercial Instruction, complementary to its Higher Primary Institution in the Avenue Trudaine. In 1867 the death of Mr. Gervais of Caen, proprietor and director of the

Superior School of Commerce, turned the attention of the chamber from the idea of establishing a school, and fixed it upon the purchase of an establishment which already enjoyed a universal reputation, and which had become a successful business enterprise in the hands of its director.

We have described in the preceding pages how the Chamber of Commerce got possession of the old school of Adolph Blanqui, and with what satisfactory results.

The idea of establishing a so-called "School of Higher Commercial Studies" was, however, simply put off by this move and not abandoned. It was a subject of consideration under the presidency of M. Houette, then under that of Guibal, but it was under the presidency of M. Gustave Roy that the Paris Chamber of Commerce undertook to solve all the difficulties involved in so costly and important a foundation.

We owe it to historical truth to say that the project of the Chamber of Commerce met only a feeble response from public opinion; a thing which should not be an occasion of surprise, considering the general feeling in respect to everything concerning commercial studies, and the marked indifference which our governments, imbued with the old university spirit, have showed down to the very present in regard to Commercial Instruction. Through a learned society, the Oriental Athenæum of Paris, an endeavor was made to stir up an interest in this question in 1875, starting from the principle that the business relations of nations are developed as a direct consequence of the elevation of their intellectual level. This society in the Provincial Session at St. Étienne discussed the creation in France of an institution of Higher Commercial Studies. Besides this, the National Society in Lyons, sharing in the same view, resolved to examine this question from all aspects by examining as fully as possible into the details of its execution. It even named a special commission for the purpose of drawing up a set of questions to be submitted to eminent men at home and abroad.

Without entering into further details, we must limit ourselves to calling attention to the general tenor of the discussion in the Oriental Athenæum of Paris, and to certain interesting points raised by the Commission of Inquiry.

After having expressed the view that a Superior Institute of Commerce ought to be founded in France for the purpose of offering to the graduates of the commercial schools, to the consulate cadets, and also to other young people of adequate preliminary education, the complementary knowledge necessary to create and consolidate new relations with foreign merchants, the Oriental Athenæum defined more especially the following as the necessary complement to these studies:

First, comparative legislation of different nations; second, instruction in the languages most used in the great commercial centres of Asia, India, China and Japan; third, courses of philosophy and æsthetics as applied to commerce, showing the influence of commerce upon the civilization, the ideas, manners and power of a country, and intended to develop in the students those intellectual and moral qualities which are capable of dignifying the professional merchant.

The Oriental Athenæum demanded in addition a course in the history of commerce among all peoples, ancient and modern; a complementary course in geography, comprising agricultural, industrial, mineral and commercial statistics of all countries; a study of the present treaties of

commerce; a complete study of the means of transportation on land and water, as also of all the means of correspondence, such as the post, telegraph, etc. It also raised the question whether one could not insist that the government should demand of candidates for consulships the diploma of the Superior Institute of Commerce. Finally it raised the question whether this institution ought to be organized like the Central School of Paris, which takes its pupils throughout the entire day, or whether it would not be better if the pupils were obliged to be present only at particular courses, as in the faculties of law and medicine. Also what would be the best means of controlling and stimulating the work of the pupils; how long the course should be; whether the minimum age for admission should be fixed at eighteen; whether the students provided with a diploma at the Superior School should be admitted without examination; and whether the Degree of Bachelor should be accepted from those pupils not provided with such a diploma; what city of France would be best adapted for the location of such a school; what capital would be required; from what source it could be drawn, etc.

On the other hand the National Society of Education at Lyons proposed the following questions:

First, whether an institute of higher commercial studies would be a useful and timely complement to the Superior Schools of Commerce; second, whether this institution could assist in completing the instruction of consulate cadets and commercial agents attached to diplomatic missions; third, whether the institution should be founded on the principle of freedom of superior instruction, or whether they should demand that the State should establish it, or whether it would not be better to adopt the mixed system, in which the State should come to the aid of private initiative. This society closed its report by expressing the following view: "The National Society of Education at Lyons having heard the report of the commission upon the proposal to found in France an institute of higher commercial studies, believing that this new organ of instruction would form a happy and even necessary complement to the actual organization of superior schools of commerce; considering further that it would contribute powerfully to enlarge, elevate and dignify the respective commercial and administrative callings; considering that the principle of the plan is not denied and that its timeliness is sufficiently well established by the facts produced in the report, and that its realization is not beyond the efforts of private initiative, hereby adopts the report of the commission, and charges its president with communicating the same to each of the Chambers of Commerce in Paris, Lyons and Marseilles, with the request to consult upon the means of ensuring the execution of the project."

The discussion of the various points raised by the members of the Oriental Athenæum of Paris and those of the National Society of Education at Lyons, each one of which threw some light upon the question, would show it to be very complex. Everything goes to show that the view expressed by the Congress of St Étienne; the list of questions which were prepared; the final report upon the answers obtained to the questions, and the monograph by M. L. Desgrands, of Lyons, upon the same question, have contributed to persuade the Chamber of Paris to take the initiative in the agitation and to put in execution with its own resources a project which it had considered for so long a time.

FOUNDATION OF THE SCHOOL.

In the sessions of the eighth of May and the twenty-fourth of July, 1878, the Paris Chamber of Commerce sketched out the plan of the School for Higher Commercial Studies, and decided upon the underlying principles. Shortly after the chamber named a commission composed of Messrs. Jacques Siegfried, Focillon and Michau, for the purpose of preparing plans of construction for the school, and what was still more important, its program of studies, a function which could not have been confided to more competent men.

On the seventeenth of May, 1880, a decree authorized the Chamber of Commerce to borrow the necessary money for the construction of the school. Finally, the inauguration of the new establishment took place on the fourth of December, 1881, in the great amphitheatre of the school under the presidency of M. Gustave Roy, President of the Paris Chamber of Commerce. There were also present Messrs. Léon Say, President of the Senate; Rouvier, Minister of Commerce and of the Colonies, and Allain Targé, Minister of Finances; and the whole Paris Chamber of Commerce, justly proud of having expended over two millions with a liberal hand in constructing a school of commerce, the most beautiful, the most spacious, the best arranged possible; for which school its members were happy to do the honors to the parliamentary, administrative, industrial and commercial interests of the country.

a. Purpose of the School.—The Paris Chamber of Commerce, it is certain, had no intention to create a competitor to its own Superior School of Commerce in rue Amelot, but desired to found an establishment of another type, a sort of faculty or central school of commerce, to which, as M. Gustave Roy said on the day of inauguration, the purpose was to attract young men of family who had completed their classical studies. We find, moreover, that the purpose of the foundation of this school is well defined by the Chamber of Commerce itself in the report which it presented on the fifteenth of February, 1879, to the Ministry of Agriculture and Commerce, and in which it expressed itself on this point as follows:

"The school is destined, in the thought of the chamber, to give supplementary instruction to the children of the bourgeoisie, who propose upon completing the college to take up a commercial career. The purpose of the chamber is to give to such young men the practical notions of the means by which order and clearness are brought into the commercial world, whose general mechanism will have been explained to them beforehand, and to impress a lofty character upon that instruction which comprehends those modern sciences underlying the necessities of international commerce." According to the same report the chamber proposed to organize an establishment capable of caring for from 250 to 500 pupils. The first of these figures would permit it to cover its expenses at the price of 1000 francs a year per pupil; the second would assure it the necessary supplementary resources for new growth, and would furnish it an excess of receipts which could be devoted to further improvements.

According to these anticipations, a little optimistic, the necessary grounds for the construction of the school were estimated to be about 5000 square metres.

b. Situation of the School.—The School of Higher Commercial Studies is situated at 108 Boulevard Malesherbes, and occupies a site containing

5910.99 metres, which the chamber purchased at the price of 517,000 francs. Apropos of this action and in response to certain criticisms which have been made on the wasteful extravagance of the chamber in the purchase of such expensive grounds, it must be said that the acquisition of this site was not by any means in itself a bad stroke of business, for at the present hour it is worth at least three times that sum, and there is every reason to believe that in fifty years, the epoch at which the money borrowed must be repaid, the site will be worth at least 2,000,000 francs. It will be sufficient then for the school to cover its expenses during this period, for the chamber to have profited finally to the amount of two millions on this operation, and for its generous action to be converted into a profitable stroke of business. This view is correct in our opinion.

The magnificent buildings of the school, the construction of which was open to general competition, embrace besides the rooms of administration, the dwellings of the director, of the instructors of studies, etc., two grand amphitheatres, twelve study halls or offices, ten examination halls, the museum of products, the laboratory, the library, business hall, a large refectory for three hundred pupils, twenty-four spacious and well-ventilated chambers for resident students, a hall for sports, large courts, etc.

c. Development of the School.—The School of Higher Commercial Studies was opened on the third of November, 1881. The increase in the number of students may be seen from the following table:

1881–82 .	50	pupils.	17	of which were	bachelors.*	10	foreigners.	40	French.
1882–83 .	92	"	35	"	"	13	"	79	"
1883–84 .	108	"	38	"	"	10	"	98	"
1884–85 .	117	"	45	"	"	8	"	109	"
1885–86 .	128	"	51	"	"	10	"	118	"

This table indicates a steady growth which will certainly increase, owing to the establishment of the preparatory division, a creation somewhat in contradiction, it is true, with the title of the school, but which will certainly be favorable to an increase of attendance.

It will be noticed that the number of foreigners has not increased in proportion to the growth of attendance. There may be different opinions upon this subject. We believe that the presence of foreign pupils in the French School of Commerce, while it shows that the reputation of the school is extended beyond our frontiers, is also a condition peculiarly favorable to instruction in foreign languages.

The pupils for the school year 1885–86 were classified as follows: preparatory, 15; first year, 67; second year, 46.

Finally, the number of the pupils at the Superior School of rue Amelot, not having been affected by the creation of the School of Higher Commercial Studies, at least to the extent which one might have feared, we conclude that a real service has been rendered to the development of our higher commercial instruction, which was in danger of being hindered from having no place in the only Superior School which the capital of France possessed. In order to judge wisely of things it is necessary to take a high point of view, and this is what the Paris Chamber of Commerce has done in showing itself resolved to wait patiently for the definite results which it pursues and which will be the work of time and of steady effort, and of the growth of ideas.

* Graduates of lycées.

CHAPTER II.

SCHOLARSHIPS; GOVERNMENT OF THE SCHOOL.

Besides those young people of family, who, having completed their studies, enter upon active work, preferring labor to idleness, the Chamber of Commerce desired to see in this school also those, who less favored by fortune, have the intelligence, courage and the will to advance. It is certain that the mixture of these two elements and the good fellowship that is the consequence of intercourse between the classes, have always produced the best results.

Scholarships and semi-scholarships have consequently been asked for and obtained for the benefit of the new school. The founders are numerous. The Ministry of Commerce, and the Chamber of Commerce have established ten each; one or more each have been founded by the following:

Le Conseil municipal de Paris, la Banque de France, le Crédit Foncier, le Comptoir d'Escompte, la Société Générale, le Crédit Lyonnais, le Crédit Industriel et Commercial, la Chambre syndicale des agents de change, l'Union des Banquiers de Paris et de la province, la Campagnie Générale des Omnibus, la Campagnie Translantique, la Campagnie du Gaz, le Gouvernment de la Guadeloupe, le Department de la Seine-Inferieure, la Chambre de Commerce de Phillipeville, MM. Gustave Roy, Dietz-Monnin, A. Poirier, Jacques Siegfried, Ch. Noël, Fould, Lebaudy, Cousté, Houette, Pestel, and finally, the banking house of the Rothschild brothers and Madam Menier, who have given the capital for a perpetual scholarship, producing a yearly income of 1000 francs.

It is interesting to note that the Chamber of Commerce of Phillipeville established a scholarship. This is an example which we are happy to mention in this place. We wish that all the chambers of commerce would understand that it is their duty to encourage and assist commercial instruction by the establishment of scholarships in the existing schools of commerce, while waiting for that which would be preferable, namely, the establishment of new schools of commerce in their own cities.

The Various Kinds of Scholarships.—The school grants official scholarships, private scholarships, and remissions of tuition. The official scholarships granted by the State and the city of Paris, are so-called external scholarships, open to general competition for those young people whose parents are unable to pay the price of board. The prize scholarships are assigned by the founders to the candidates they designate. The remissions of tuition are granted by the administrators of the school; they vary from 250 to 500 francs.

The price of board at the school, including tuition, is 2800 francs for the resident students; 1300 francs for the so-called "half-residents" or day pupils. Every pupil who has obtained an external scholarship can become a resident pupil by the payment of 1800 francs. Every pupil who has obtained a remission of 500 francs can become a resident pupil by the payment of 2300 francs, or a day pupil by the payment of 800 francs. Every pupil who has obtained a remission of 250 francs can become a resident pupil by the payment of 2550 francs, or can pursue the studies as a day pupil by the payment of 1050 francs.

Government or City Scholarships.—Those young men, whether bachelors, *i. e.*, graduates of lyceés, or not, who desire to obtain a government

or city scholarship are compelled to enter into competition. The candidates must be of French birth, and have completed their sixteenth year at the time of the examination. Candidates for the scholarships of the city of Paris must be residents of Paris. Five government scholarships are put up each year for competition, a notice inserted in the official journal indicates the date of the written examination, and is held at the following cities: Paris, Lyons, Marseilles, Toulouse, Bordeaux, Rouen, Lille, Nantes, Nancy and Dijon.

Vacations.—The vacation comprises about three months each year, from the first day of August to the first day of November. The preparatory class begins a month sooner.

Work during Vacations.—During vacations the pupils must prepare, according to a plan issued by the school, a paper which represents at least a month's work, amounting to eight hours a day. This paper must be prepared from a point of view essentially commercial: technology, the description of machines must have only a secondary place.

Those papers are considered the best which indicate the sources from which the information is drawn; the geographical situation of the establishments visited; the names of the persons familiar with the subjects discussed, and those which give at the same time the figures relating to production, consumption, importation and exportation of the raw materials or the manufactured products studied.

Organization of the School.—The school receives resident and day pupils; foreigners are admitted on the same conditions as natives. The course is opened on the first Monday in November; the length of the course, which, like that of the schools at Antwerp, Havre and Bordeaux, has been two years up to the present, will shortly be extended to three years. Beginning with the third of November, 1885, a preparatory class was opened for those pupils who wished to prepare themselves to enter the first year of the course.

It is hardly necessary to say that we approve of this feature, which we have already praised in various connections in discussing the schools of Havre and Bordeaux. So long as commercial instruction is not systematically organized into primary, secondary and superior schools, the higher schools will have an interest in organizing in connection with themselves such preparatory classes as will ensure for them well prepared pupils. Such a class has long been a feature of the Superior School of Commerce at Paris.

The cost of board and tuition has been fixed as follows: For the preparatory year the price for day pupils is 1000 francs, plus 300 francs for lunch, which is obligatory; the price for resident pupils is 2200 francs. In the regular course, both in the first and second year, the price for day pupils is the same as in the preparatory class; that for resident pupils is 2800 francs. The incidental costs for both classes of pupils amount to about 120 francs a year; these are necessary expenditures, even for those pupils holding scholarships.

CHAPTER III.

INSTRUCTION; DIVISION OF THE CURRICULUM; DISTRIBUTION OF THE HOURS.

a. Instruction.—The Paris Chamber of Commerce desires that the instruction at the School of Higher Commercial Studies should respond to the needs of modern business, which demand of the merchant a very extensive preparation as well as an education capable of developing in him a feeling of the elevated rôle devolving upon commerce in the upward movement of civilization and progress. "It has seemed to us," said M. Gustave Roy, at that time president of the Chamber of Commerce, in his inaugural address at the opening of the school, "that commercial instruction must be advanced in proportion as science advances.

"That is why we have founded the School of Higher Commercial Studies. For too long a time in France commerce has been considered as an inferior career; it is time to protest against this idea, and to show that the vocations of merchants and bankers demand as much intelligence as any other. It is time for us to impress upon the minds of our youth those truths which the previous course of their education has concealed from them. We have the faith; we shall have the patience. Just and fruitful ideas make way slowly but surely. For our part, as the advance guards of the commerce of Paris, in which the commercial and financial life of France is centralized, let us study its wants and prepare its future. We have learned in commerce as well as in politics to have no fear of liberty, and it is in these ideas that the Chamber of Commerce asks its professors to train the youth."

It is worth while quoting these words of an experienced man, expressing his own opinion and that of the chamber over which he presided, upon a creation which had cost enormous sacrifices. In this case words did not precede acts; they followed them. The capital of France, endowed with a new and superior school, may now say to its friends that "the economic education of their children need never again be ignored in the difficult struggle which they must sustain. This education is as essential to the demands of modern commerce as military education is to that of war. We have no wish that you should be any longer deprived of this on account of the lack of schools and trained professors. Our former school is full; here is a still larger one. Fill it! Show us that we have not out-run the public demand."

We emphasize the point that the Chamber of Commerce, impressed with the insufficiency of the services rendered to commerce by consuls, and attributing rightly this insufficiency to their lack of economic knowledge, has opened in the direction of the consulate career a new outlet for the pupils of its schools. We find these views squarely announced in the report of M. Gustave Roy upon the program of studies of the school. "The chamber," he said, "wishes to fill a want of the public administration in preparing young men who shall be able to represent France in its consulates." It is very certain that with this idea the instruction of the new school was reinforced by new courses in law and legislation.

b. Program of Studies.—The program of studies, the very title itself given to the school, shows that it was intended to be as advanced as possible. The report of M. Gustave Roy sketches very judiciously its great outlines. At every point in the detailed examination of the question

and constitution of the program itself, one is forced to recognize that the program of studies, tested since 1820 in the Superior School of Commerce and recently brought up to the level of modern knowledge and needs by M. Schwaeblé, aided by the Council of Administration of the school, furnished at almost every point the desiderata of an advanced course. It was, in consequence, this later curriculum, slightly amended and strengthened upon the side of law and legislation, which was adopted. Without doubt, as M. Jacques Siegfried advised in his "Memoir," it would not have been a bad idea for the committee to have studied in addition the curricula of the schools at Antwerp, Lyons, Havre and Marseilles, but for lack of time this was not done.

The result is, therefore, that the School of Higher Commercial Studies and the Superior School of Commerce at Paris instruct in almost exactly the same subjects. It is true the organization of the two establishments is different, and each one has its own particular physiognomy which distinguishes it. But that which concerns the public chiefly is results. Emulation has resulted from the rivalry, and this will certainly be a benefit. We wish, therefore, that at that time, when the schools of commerce shall be organized as parts of a single plan, that there shall be established between the pupils of these schools annual competitions upon the theory as well as upon the application of the studies to the purposes intended—competition which would permit us to judge of the methods and value of each school to the great benefit of the progress of economic commercial instruction. But we shall touch upon this question later.

c. Preparatory Schools.—The method of instruction in the School of Higher Commercial Studies is based upon oral lessons in the classroom, and upon subsequent examinations relating to the subject-matter of the courses. The length of the course, as we have said, is to-day three years. Of it, one year is the preparatory class, and two years are given to the normal or higher classes.

The program of the subjects in the preparatory division is fixed by that of admission to the first year of the normal course, and embraces French, elements of one foreign language, mathematics, algebra, geometry, physics, chemistry, elementary natural history, history of France and general geography. This course is common to the candidates for admission into the first year of the normal course, and to the candidates who desire to compete for the day scholarships.

d. Normal Course. First Year.—The studies of the first year comprise accounting, mathematics, geography, the study of merchandise, commercial analyses, political economy, the various branches of law in their relation to commerce, penmanship, and foreign languages—one southern and one northern language at the choice of the pupils.

Second Year.—Pupils continue the study of the subjects begun in the first year, and take up in addition the history of commerce; budgetary, tariff and fiscal legislation; the study of transportation, the importance of harbors, railroads, water-ways, canals, docks, etc. Below is given the program of the studies and the number of hours given to each branch.*

This program offers in its entirety the elements of an excellent economico-commercial instruction, such as we should like to see in the near future in high honor among us. For it would quickly form a nursery of young merchants able to develop our domestic and foreign

*See page 84.

commerce, at the same time that it would develop for the future a solid body of judges prepared for the work of the commercial tribunals of consuls, possessing knowledge of commercial affairs and able to render us great services in foreign countries; of properly trained teachers and of experienced accountants and administrators, of whom we foresee that France will have great need whenever we shall determine to apply resolutely a reasonable system and the principles of administrative economy to the conduct of the affairs of the nation.

e. Distribution of the Hours.—In the preparatory class the school day begins at quarter-past eight o'clock and closes at half-past four. The day pupils may remain at the school until half-past six to do their work, upon paying a supplementary fee of fifteen francs a month.

The following table shows the curriculum as it was in 1886; the tables and synopsis on page 91 and following show the curriculum in 1893.

PREPARATORY CLASS.

	Hours per Week.
French Language and Style	4
Mathematics and Practical Geometry	5
Physics, Chemistry and Natural History	3
Accounting and Elementary notions of Law	3
History	1½
Geography	3
English or German Language	5
Drawing	3
Penmanship	3
Examinations	2
Instructive Walks and Visits	4
Total	36½

Regular Course.—First and second years:

Accounting	8	Hours per week in each class throughout the year.
Mathematics	3	" " " " 1st " " " "
Mathematics	1½	" " " " 2d " " " "
Study of Merchandise	3	" " " " each " " " "
Tests of Merchandise	2	" " " " 1st " (second semester).
Tests of Merchandise	1	" " " " 2d "
History of Commerce	1½	" " " " 2d " throughout the year.
Commercial Geography	1½	" " " each " " " "
Civil Code and Civil Procedure	3	" " " " 1st " " first term.
Commercial, Industrial and Maritime Law	3	" " " " 1st " from the end of February to end of June.
Commercial, Industrial and Maritime Law	3	" " " " 2d " throughout the year.
Budgetary, Fiscal and Tariff Legislation	3	" " " " 2d " " first term.
Commercial Legislation of Foreign Countries	1½	" " " " 2d " " third term.
Political Economy	1½	" " " " 1st " " the year.
Study of Transportation	1½	" " " " 2d " " third term.
Equipment and Commercial Material	1½	" " " " 2d " " " "
English and German Languages	5	" " " " each " " the year.
Spanish or Italian or Portuguese	3	" " " " " " " " "
Penmanship	30	" " " " 1st "
Penmanship	20	" " " " 2d " (Distributed throughout the year.)
Commercial Visits	4	" " " " each " (Beginning with January.)

CHAPTER IV.

VARIOUS EXAMINATIONS.

a. Preparatory Class.—Candidates who have completed their fifteenth year are admitted into this division without special examinations, and at any time during the year. This class is destined to train pupils for the first year of the regular course.

b. Regular Course.—First and second year. Those young men furnished with a diploma of Bachelor of Letters or Sciences, also the bachelor of special secondary instruction may enter directly and without examination upon the work of the first year. No student is admitted directly to the second year's work. The entrance examinations to the first year take place from the fifteenth to the thirtieth of October of each year in the buildings of the school. This examination is divided into two parts, written and oral.

The written examination consists of the following:

First, an essay (one and one-half hours); second, a mathematical subject (two hours); third, the translation, with the aid of a dictionary, of a French text into English or German at the choice of the candidate (one hour.)

The oral examination comprises:

First, arithmetic, algebra and geometry; second, physics, chemistry and natural history; third, general geography; fourth, the history of France; fifth, explanation of an English or German text.

All the subjects comprised in this program are equally obligatory. Candidates whose knowledge upon any one of the subjects is considered insufficient cannot be admitted. The topics for the written composition can be taken from any subject in the program. A correct style, a regular and legible handwriting are essential conditions.

Besides a certificate of vaccination and of certificates proving the age (the completed sixteenth year being the lowest year accepted) and the morality of the candidate, those persons who wish to take part in the examination must send to the director of the school before the fifteenth of October, a request to that effect upon stamped paper, declaring their intentions, and also stating whether or not they desire a day scholarship. After the close of the examination the list of pupils admitted is definitely fixed by the Council of Administration of the school upon the proposition of the examining board, and published in the official journal.

Foreign pupils must furnish references to their consuls. They are admitted to the school in consequence of a special examination intended to determine whether they can follow successfully the course of study.

Special Examinations.—The method of instruction in the School of Higher Commercial Studies is based, as we have already said, upon oral lessons and very frequent examinations. A table posted in the school indicates to the pupils the dates of these special examinations, which take place at least twice a week; one upon foreign languages, and one upon other subjects of instruction in the program.

The rules of the school prescribe that no pupil may be required to pass more than three special examinations and more than two general examinations in the same week. Two pupils enter at the same time the office of the examiner. The pupil who has just been examined goes out and informs his comrade, who stands next to him upon the list, that his

turn has arrived. The examiner assures himself that the note-books of the subject upon which it is his business to examine are kept up to date, that the graphical and statistical sketches are made with care, and he puts to the pupils who come before him such questions as are intended to ascertain whether the lessons in the school-room have been studied and understood. He then gives a mark which figures in the certificate of the pupil.

Papers and Reports.—Besides their examinations the pupils are required to write twice a month a paper or report upon a topic assigned by the management, and relating to some subject of instruction in the program. The subjects assigned for these papers are posted up for eight days; they bear the date of the day when they must be presented by the student.

General Examinations.—The general examinations cover the entire instruction in the course. They take place at the end of each course. The questions relating to each subject are drawn by the pupil by lot. The marks for the general examinations in each subject are counted individually, as well as the average of the special examinations. The general average of the student is based upon the average of the special examinations and the marks of the general examinations.

Marks.—The value of the marks is fixed according to the table below:

Zero (°)	failure.	9, 10, 11	passable.
1, 2, 3	very bad.	12, 13	fair.
4, 5, 6	bad.	14, 15, 16	good.
7, 8	feeble.	17, 18, 19	very good.
20	perfect.		

Classification of Pupils.—The marks obtained in the general and special examinations serve for the classification of pupils at Easter, and at the close of the year, periods at which reports are sent to the parents. The classification at Easter is provisional; the classification of July serves to establish the passing rank from the first to the second year. No pupil can pass from the first to the second year unless he has obtained a general average of at least nine (9).

The final classification is based upon the combined general average of the examinations of the first year which count for one-fourth, and upon that of the examinations of the second year which counts for three-fourths. To obtain a certificate one must have reached a general minimum average of ten (10). To obtain a diploma one must have reached at the end of the second year a general minimum average of thirteen (13). The report of classification given to each pupil contains in connection with the subjects of instruction, two columns of marks; the one receiving the general average of the special examinations; the other the marks of the general examinations. The marks appearing in these two columns are added together respectively, and each of the sums thus obtained is divided by the number of subjects. The quotient gives the average of the total marks of the special and general examinations. For example:

The quotient of all the special examinations of a pupil is 107 for eleven subjects; that of all the marks of his general examinations is 106 for eight subjects, thus, $\frac{107}{11}=9.72$; $\frac{106}{8}=13.25$. The general average obtained is the sum of 9.72 and 13.25 divided by 2, that is 11.48. The average at the close of the second year is diminished or increased by the average of the report of the first year. Example: (Giving the average of the first year as ten)$-[10+(3\times 11.48)]+4=11.11$—the final mark.

CHAPTER V.

VARIOUS REWARDS, DISCIPLINE, DIPLOMAS, CERTIFICATES AND PENALTIES

The diplomas, signed by the Minister of Commerce, are granted those pupils, foreign or native, who have satisfied in an able manner all the tests of the final examinations at the end of the second year. In August, 1883, forty diplomas were conferred upon a class of forty-six pupils; in August, 1884, thirty-nine diplomas were conferred upon a class of fifty-one pupils; in August, 1885, twenty-nine diplomas were conferred upon a class of forty-nine pupils. It is evident that the severity of the examinations for these diplomas is steadily increasing from year to year. There is also for foreign pupils a special diploma intended to testify that they have followed the courses of the school with success.

Certificates of capacity are given to pupils of the second year who, although not able to obtain a diploma, have, nevertheless, given proof of sufficient knowledge of the most essential subjects of instruction.

The list of pupils graduated is published in the official journal. There is no formal distribution of these diplomas, but a simple handing over of the diplomas and certificates on the part of the director. This lack of ceremony is not justified, in our opinion, by good reasons. Everything which can contribute to dignify the instruction, to throw into relief the result of the combined efforts of instructors and pupils ought to be utilized for the profit of this instruction, and to increase the faith in it on the part of the public. One should have faith in superior commercial instruction, and should show that one has faith. This instruction is destined to take an official place above secondary general instruction, of which it will be a development. For the present let us mark for it that place which it has been able to secure.

General Discipline.—The inspector of studies who is present at the various courses and at the examinations, devotes himself to all the details of the work of the pupils. He is charged, under the authority of the director of the school, with maintaining a careful observation of the program of instruction, and of insuring the maintenance of discipline among the pupils. He is aided in the accomplishment of his mission by the under-instructors to the number of four.

As a relaxation from mental fatigue the council of the school has decided that the pupils should have at their disposal a hall of sports; a billiard hall; a checkers and chess room, as well as interesting reading. Up to the present no restrictions have been placed on the various methods of relaxation. Besides this, boxing, fencing and dancing halls enable the pupils to amuse themselves according to their tastes. Finally, during the recreation hours the pupils are authorized to smoke in the hall of sports and in the court yards.

Punishment.—The following punishments may be inflicted upon the pupils: half demerit, entire demerit, temporary expulsion, reprimand pronounced by the director, not in the presence of the council of the school; reprimand in the presence of the council, and expulsion pronounced by the council upon the recommendation of the director.

The inspector of studies notes all infractions of the rules by the pupils, and the reprimands which they have incurred in consequence of negligence or irregularity in their work. The council of the school takes into consideration the disciplinary marks of each pupil when it makes changes in the divisions, or when considering applications for certificates and diplomas.

CHAPTER VI.

ADMINISTRATION; RECEIPTS; EXPENSES.

The school is administered by the Paris Chamber of Commerce which founded it. It receives no subsidy from the State.

The most serious efforts and earnest solicitude are employed by the president, M. L. Hielard; by the administrators, who aid him with their experience; by the director, M. Jourdan; by the president of the Chamber of Commerce, M. Dietz-Monnin, who sits in the council by right of his office, and who rarely fails to be present at its sessions; and, finally, by M. Gustave Roy, in order to ensure the development and the success of the School of Higher Commercial Studies. The careful study which we have made of the progress of this school shows that it has passed beyond the difficulties of its early years, and is advancing each year.

Budget.—The budget of the school is very large, as the Paris Chamber of Commerce wished to do a handsome thing, and desired that no expense should be spared to call attention to its beautiful creation. Of course, experience cannot fail to show reforms which it will be necessary to carry out in the *modus vivendi* of the various departments, as well as in the construction of the curriculum and its application. Thanks to certain economies which were necessary and which could be carried through without inconvenience; thanks also to the steady growth of the number of pupils, which must be still more marked in consequence of the formation of the preparatory class, it is to be presumed that the financial condition of the School of Higher Commercial Studies will be sensibly improved from this time on. This, at least, is the view which we share, being persuaded that there is room in Paris for two great schools of commerce as flourishing as the rue Amelot.

The following table shows the receipts and expenses for the school year 1884–85:

RECEIPTS.

Term Fees of the Pupils	176,530.00	francs.
Profits in the Students' Supplies	3,696.00	"
Total	180,226.00	francs.

EXPENSES.

Of the Personnel and Administration	44,840.00	francs.
Remuneration of Professors and Examiners	90,180.00	"
Expenses of Food	58,000.00	"
" Heating	7,231.00	"
" Lighting	6,500.00	"
" Laundry	4,500.00	"
" Advertising	3,000.00	"
" Library	1,200.00	"
" Laboratory	600.00	"
" Maintenance and Repairs	4,500 00	"
" General Costs	4,500.00	"
" City Water	1,500.00	"
" Taxes and Insurance	8,453.00	"
Annuity to the Credit Foncier	100,904.25	"
Total	337,908.25	francs.

This shows a deficit of 157,682 francs, comprising, it is true, the rent of the school buildings, represented by the annuity payable to the Credit Foncier for interest and repayment of the loan by this useful establishment to the Chamber of Commerce.

The following was the budget for the school year 1885–86:

RECEIPTS.

Term Fees of Pupils	217,550.00	francs.
Profits on Students' Supplies	4,067.00	"
Sales of Material	2,400.00	"
Balance	4,763.45	"
Total	228,780.45	francs.

EXPENSES.

Payment to Personnel and Administration	44,840.00	francs.
Professors	58,550.00	"
Examiners	11,720.00	"
Donations	2,000.00	"
Food	63,593.00	"
Heating	7,200.00	"
Lighting	6,960.00	"
Laundry	5,079.45	"
Advertising	5,000.00	"
Library	1,200.00	"
Laboratory	1,600.00	"
Maintenance and Repairs	5,900.00	"
General Costs	4,700.00	"
City Water	1,895.00	"
Taxes and Insurance	8,453.00	"
Total	228,780.45	francs.

This report differs essentially from the preceding one, as it shows that the school is making expenses and receipts meet, without counting, it is remembered, the annuity to the Credit Foncier, which has been assumed by the Paris Chamber of Commerce in consequence of an agreement entered into between the chamber, the city and the State, and a law relating to the construction of a bourse. By this combination the chamber, by means of additional hundredths levied upon Parisian commerce, finds the necessary means to cover the annuity due to the Credit Foncier.

By alienating the most certain of its revenues and by mortgaging the future for fifty years, the Paris Chamber of Commerce, consulting only the dictates of a wise patriotism, has not hesitated to extend superior commercial instruction, and to attract to it the sons of our merchants. The fortunate arrangement, of which we have just spoken, will not impoverish any one; and Paris possesses, as a result, a magnificent establishment of commercial instruction, the most beautiful, without doubt, in the world. We may surely say here, if ever, "All's well that ends well."

The director, M. Jourdan, an engineer of arts and manufactures, has been at the head of the School of Higher Commercial Studies since its foundation. He had formerly been the director of the Commercial School in avenue Trudaine, and had there attracted the attention of the Chamber of Commerce. M. Huret, inspector of studies, was also a member of the instructing body of the Commercial School, where he had been a professor for five years.

The large scheme adopted by the Chamber of Commerce for its School of Higher Commercial Studies explains the large number of professors. The faculty numbers forty-four including seven examiners. The chamber intended that the equipment of the new school should fully correspond to its really grandiose plan. It has succeeded at the cost of large sacrifices, which will be appreciated and which will produce, in our opinion, the results which the chamber expects of them.

CHAPTER VII.

CONCLUSION.—*Noblesse Oblige.*—But certain titles are heavy to carry, and the Paris Chamber of Commerce has furnished us a new proof of this. A part of that which has come to pass had already been foreseen in the interesting report of M. Jacques Siegfried, where he says: "If the Paris Chamber of Commerce should count upon a considerable number of pupils at the beginning it would run the risk of being deceived. Experience shows that if the utility of superior commercial instruction gradually makes itself felt more and more, it must, on the other hand, count upon meeting those prejudgments and settled habits of thought over which we cannot triumph without much patience."

With its attention occupied in raising the level of commercial instruction, and consequently the prestige of the commercial career, the chamber cherished more illusions than M. Siegfried. In fact, M. Gustave Roy, its president, said in the inaugural address, from which we have already quoted some passages: "We have confidence in our work; it is proposed to draw into this school young men who have already completed their classical studies, not those who have not succeeded in the colleges, but those who have distinguished themselves there."

The immediate future, however, did not justify the views of M. Gustave Roy for the reason that classical instruction never turns the aspiration of its pupils toward the commercial career, and the college graduates, notably those who have distinguished themselves, despise commerce and think that they are destined exclusively for liberal or administrative careers.

Thus we see that the necessities of existence turned the school away from the strict observation of a rule which would have brought it to an early death of inanition, and the School of Higher Commercial Studies, which was intended to give only superior instruction, has been compelled in order to replenish its classes to devote itself to secondary instruction. It is this same reason which compelled it to create classes preparatory to this latter instruction. That is to say, to introduce a primary element in the very institution where the secondary element was to have been excluded on principle.

We have advised this last measure in the interest of the school, and we hope for its success. In order to ensure homogeneity in the classes, and with a view of raising the character of the instruction, it will probably be necessary to double the preparatory year for certain pupils, or to cut this division into two sections. Perhaps it will even be advisable to adopt the same measure for the first year of the regular course, so that the second year may really become an advanced course.

As to the rest, however, we are of the conviction that this measure will be only transitory. The future of commercial instruction is assured because necessity compels it. Under the pressure of economic events whose action on ideas and manners is powerful, as well as under that of better logic, we shall soon see a rapid transformation in our way of viewing the whole subject of education. A logical reorganization of general secondary instruction will prepare the youth for the professional instruction which they may have chosen, and the schools of commerce, considered on a par with other special schools, will not then be less advanced.

CHAPTER IX.

ASSOCIATION OF THE FORMER GRADUATES OF THE SCHOOL OF HIGHER COMMERCIAL INSTRUCTION.

This association was founded on the twelfth of July, 1883. Its place of meeting is at the school, 108 Boulevard Malesherbes. This association is primarily a social benefit society. It has for its purpose: First, to maintain and create amicable relations among the alumni of the School of Higher Commercial Studies; second, to come to the aid of former associates who may need assistance; third, to furnish to the various interests of the association information of every kind. In order to accomplish these various purposes: First, a place of meeting has been fixed, these meetings are held every week; second, monthly economic conferences and discussions are held by the members of the association; third, a quarterly bulletin has just been established, consisting of four parts: (*a*) reports of the sessions of the general committee; (*b*) various studies by former pupils of the school; (*c*) notices of wants; (*d*) advertisements for the benefit of the members of the association; fourth, the president can, in case of urgency, give immediate pecuniary assistance; fifth, a committee of employment is established, charged with aiding their former comrades in the choice and obtaining of positions; sixth, as a large number of the alumni have studied law and been enrolled as advocates before the Court of Appeals, a judicial council has been established. It gives advice upon all legal questions of interest to the members of the association. The idea seems to us excellent. We need lawyers who know how to analyze a balance, a liquidation, etc. Lawyers who have taken a course in the Superior School of Commerce can hardly fail to be successful. The association is administered by a committee composed of eleven members.

The Official Program of the Courses of the School of Higher Commercial Studies and the Preparatory School connected with the same.

(*Ministerial Orders of 27th of July, 1891, and 27th of July, 1892.*)

PROGRAM OF THE COURSE OF THE PREPARATORY SCHOOL.

DESCRIPTION OF COURSES.

SUBJECTS OF INSTRUCTION.	Hours per Week.
French	5
Arithmetic } Algebra }	5
Geometry	1
Accounting	3
Elements of ordinary legislation	1
Physics	1½
Chemistry	3
History	1½
General Geography	3
Drawing	2
Penmanship	1
Living languages	4
Total	31

PREPARATORY SCHOOL

FRENCH.

Exercises in Orthography, Composition and Correspondence.

ARITHMETIC.

Preliminary Definitions.—Magnitude, numbers, measure of magnitude, unity, whole numbers, fractions, fractional numbers.

Oral Numeration.—Definitions, decimal numeration.

Written Numeration.—Definitions, absolute and relative value of a number.

Operations in Whole Numbers.—Addition and subtraction. Definitions, rules, proofs; exercises in rapid calculation both mental and written in addition and subtraction. Multiplication. Definitions. Table of multiplication of the first fifteen numbers. Different cases of multiplication; theory, and practical rules. Theorems relative to multiplication. Exercises in rapid multiplication by 4, 5, 9, 11, 15, 19, 21, 25, 29, 30, 31, 39, 41, 125, their multiples and sub-multiples. Division, definitions, rules, exercises, short division, theorems relative to division. Division by 25, 75, 125, their multiples and sub-multiples.

Properties of Whole Numbers.—Divisibility. Preliminary theorems. Remainder in the division of the number by 2, 3, 5, 9, 11, 4 and 25. Proofs by 9 and 11 of the multiplication and division. Exercises.

Greatest Common Divisor.—Definition. Finding the greatest common divisor of two numbers. Fundamental theorems. Rule. Simplification. Exercises. Properties of the greatest common divisor. Greatest common divisor of several numbers.

Prime Numbers.—Definitions of prime numbers and of numbers prime to one another. Theorems. Formation of a table of prime numbers. Separation of a number into its prime factors. Rule. Exercises. Divisors of a number. Methods of finding them. Greatest common divisor. Least common multiple.

Fractions—Definition. Reducing fractions to their most simple form. Reducing to the same denominator. Operations in fractions. Exercises. Decimal fractions. Definitions. Numeration of decimal numbers. Operations in decimal numbers. Estimation of the quotient by means of a given decimal unit. Conversion of common fractions into decimal fractions, and vice versa. Irreducible common fraction giving rise to a circulating fraction. Circulating fractions. Definitions. Finding the generator of such fractions.

Powers and Roots.—Definitions and theorems. Extraction of the square root of a whole number. Extraction of the square root of a whole number or fractional number with a certain approximation. Square roots of decimal numbers. Squares and square roots of fractions. Exercises in rapid methods of extracting the square roots. Cubes and cube roots. Definitions. Extraction of the cube root of a whole number. Extraction of the cube root of a whole number or fractional number to a given approximation. Cube roots of fractions and of decimal numbers, the cube of a fraction. Positive, negative, entire and fractional exponents. Zero exponents.

Measures.—Ancient French measures and present lawful measures. Comparison. Conversion of ancient into present, and vice versa. Exercises in rapid conversion. Measures of length, of surface, of volume, of capacity, of weight. Monetary measures. Foreign moneys. Application of rapid methods in the conversion of French money into foreign money, and vice versa.

Complex Numbers.—Definitions. Operations in complex numbers.

Ratios.—Definitions. Proportions. Proportional magnitudes. Theorems. Applications. Rule of 3 (direct, inverse, simple and compound proportions). Method of reducing to unity. Easy questions in proportional parts, alligations, partnerships. Rule of simple interest. General formula. Methods of rapid calculation of the ordinary rates of interest. Definitions of compound interest. Discounts (foreign and domestic). Rules of partnership. Definitions of progressions (arithmetical, geometrical, increasing and decreasing).

ALGEBRA.

Algebraic Calculations.—Employment of letters and signs as a means of abbreviation and generalization. Similar terms. Addition and subtraction. Multiplication. Rules for the signs. Division of monomials. Division of polynomials. Introduction and calculation of negative numbers. Negative exponents.

Equations of the First Degree Containing One Unknown Quantity.—Solution: First, of the system of two equations of the first degree containing two unknown quantities; of the system of three equations of the first degree containing three unknown quantities. Brief explanation of the method of solution by the employment of indeterminate factors, of any number of equations of the first degree containing a corresponding number of unknown quantities.

Problems in Equations of the First Degree.—Interpretation of negative results.

Equations of the Second Degree Containing One Unknown Quantity.—Solution of the equation $ax^2+bx+c=o$. Discussion. Imaginary roots. Decomposition of the trinomial ax^2+bx+c into its factors of the first degree.

Arithmetical and Geometrical Progression.—Theory of logarithms deduced from progression. Logarithms of which the base is ten. Tables. The characteristic. Introduction of negative characteristics, for the expansion of numbers smaller than unity, of the logarithmic calculations. The use of tables.

Compound Interest and Annuities.—Application of logarithms to these questions.

GEOMETRY.

Of the Straight Line.—Perpendicular lines. Oblique lines. Parallel lines.

Of Angles.—Triangles. Polygons.

Of the Circumference.—The circle. Measure of angles. Arcs and cords. Tangents and secants of a circle. Measure of the circumference of a circle.

Proportional Lines.—Similitudes.

Measure of Plane Surfaces.—Triangles. Quadrilaterals. Polygons. Circles.

Measure of the Surface and of the Volume of the Principal Solids.—Prism. Parallelopiped. Pyramid. Frustrum of the pyramid. Cylinder. Cone. Frustrum of the cone. Sphere.

Practical Applications.—Capacity of casks. Volume of a bag of sand, etc.

BOOKKEEPING.—I. IDEAS OF COMMERCE AND THE STUDY OF COMMERCIAL DOCUMENTS.

Commerce.—Commerce in general. Wholesale commerce and semi-wholesale. Retail commerce. Domestic commerce. Foreign commerce. Importation. Exportation.

Persons Engaged in Commerce. — Manufacturers. Merchants. Bankers. Brokers. Remitters. Bucket-shop brokers. Produce brokers. Naval brokers. Commissioners. The bonder of goods. Commercial transportation. Agents.

Exchanges.—Nature of exchanges. Commercial exchanges: buying and selling for cash, with or without discount. Buying and selling on time or on account, with or without interest. The art of buying and selling: general principles. A knowledge of products. A knowledge of affairs. A knowledge of markets and seaport markets. Estimation of expected gain.

Documents Relating to Exchanges.—Orders of sale. Orders of purchase. Invoice. Bills. Quittance. Memorandum. Goods on commission. Delivery of goods. Receipt of goods. Card of samples, etc.

Regulations of Exchanges.—Money. Bank bills. Paper money. Checks. Checks made to order. Bills of exchange. Mandate. Assignment. Letters of credit. Clearing-house transactions.

Rules of payment: In specie, in bank bills, in paper money, by check, by means of offsets.

Transportation.—By wagon. By railroad: application of the different French and international tariffs. Transportation by canals and rivers. Transportation by sea. Packing of merchandise shipped. Formalities of shipping. Insurance. Tags. A detailed memorandum of goods shipped. Bill of lading. The different tariffs of transportation. Insurance premium.

II. ELEMENTS AND GENERAL THEORY OF ACCOUNTING.

Principal Terms Used in Accounting.—Debtor. Creditor. Debit. Credit. Receipts. Expenditure. Accounts. Keeping the books. Definitions. Different sorts of agents.

Accounts.—Definition of an account. Manner of disposing of an account. Account of receipts and account of payments. Cash book taken as an example. Practical exercises. Illustrations. Fluctuations of receipts and expenses. Closing and reopening a cash account. Agreement of the receipts and expenditures.

Impersonal accounts, representing the inventoried wealth of the enterprise. Personal accounts, representing the third party, debtors or creditors of the enterprise.

The Journal.—Definition. The use of the journal. Formula for entries in the journal. Single journal, divided journal. Different modes of dividing the journal. Auxiliary or analytical journal of receipts or cash expenses, bills, store, factory, etc., and transactions carried on by

correspondence. General or synthetical journal. Models. Formulæ for the articles recapitulating the relation of the auxiliary journal to the general journal. Practical exercises with actual accounts. Additional advantage of the auxiliary journal and the general journal.

The Ledger.—Definition. Use of the ledger. Single ledger. Divided ledger. General or synthetical ledger, auxiliary or analytical ledger. Models.

Relation of the journal to the ledger. Practical exercises in opening an account, and the relation of entries in the journal to those in the ledger. Precautions to be taken in order to avoid errors. Agreement of the general journal and the general ledger. Agreement of the general ledger and the auxiliary ledger.

Collective Accounts.—Definition. Advantage of collective accounts for controlling the collections of accounts opened in the auxiliary ledger, and for simplifying the balancing of accounts.

Balancing Accounts.—Definition. Agreement of entries in the journal and the accounts in the ledger, obtained by balancing the accounts. Periodical balances. Daily balances. Advantage of frequent balances. Model of a general ledger balance with and without collective accounts. Models of balancing the auxiliary ledger. Model of balancing the general ledger, with the methodical classification of accounts.

"*Chiffrier-balance.*"—Definition. Its function; its utility for obtaining the balances in enterprises having a large number of accounts. Daily balances obtained by means of the chiffrier-balance corresponding to the number of accounts.

Division and Classification of Accounts.—Different species of accounts. Necessity for a classification. Mathematical expressions and commercial operations. Rational classification, which results in accounts of the nominal capital. Accounts of the wealth or means of carrying on an enterprise. Accounts of persons, debited or credited. Rate of profits. Permanence of the inventory.

Analysis of the Different Series of Accounts.—Accounts of the nominal capital of an enterprise. Capital stock. Bonds. Reserves. Different amortizations.

Accounts of the wealth composing the inventory of the means of carrying on an enterprise (at the price of the net cost of the properties):

a. Real Estate.—Commercial funds. Shares. Expenses of establishing the business. Licenses. Realties. Personal property. Materials.

b. Disposable Property.—Money. Bills receivable. Documents. Raw materials. Warehouses of sale.

c. Fixed Property.—Manufactory. Buildings. Investments. Joint accounts. Agencies. Lands, etc.

Accounts of persons debited or credited (at the price of purchase or sale).

Accounts of profits (debit or credit of the differences between the net price and the price of sale). Account of sales. Accidental profits and losses. Results of the different operations. General expenses. Accounts of receipts and expenditures.

Inventory. Balance Sheet.—The inventory of balances of the classified accounts. Balance sheet. Book of balances. Book of inventories.

The Elements of Ordinary Legislation.

Brief notions relating to matters of public and civil law, commercial law, industrial law, as prescribed in the program of the normal courses.

PHYSICS.—GENERAL NOTIONS.

Preliminaries.—A few notions of mechanics, work, living force.

Force of Gravity.—Direction of the force of gravity. Centre of gravity. Weights. Balances. Precision. Sensibility. Weights of bodies. Law of the fall of bodies. Atwood's machine. The pendulum: its applications. Notions regarding the different conditions of bodies.

Hydrostatics.—Principle of the equality of pressure in fluids. Free surface of liquids in equilibrium. Pressure at the bottom of vessels. Hydraulic pressure. The principle of vessels in communication. Applications. Principle of Archimedes. Specific weights. Relation of the areometers to constant weight. Weight of the air. The barometer. Law of Mariotte. The manometer of free air and compressed air. Pneumatic machine. Pumps, syphons and areostatics.

Heat.—Expansion of bodies by heat. The thermometer. Co-efficients of expansion. Their determination. Their use. Conductibility of bodies. Specific heat. Methods of mixture. Fusion, solidification. Latent heat. Freezing mixtures. The formation of vapors in a vacuum. Saturated and non-saturated vapor. Maximum of tension. Tables. Mixture of gas and vapors. Evaporation, ebullition, distillation. The latent heat of vapors. The principle of the steam machine. Expansion. The ideas of thermo-dynamics. Notions of the equivalent of mechanical work and heat.

Hygrometry. Rain. Snow. Dew. Distribution of the temperature at the surface of the earth.

Magnetism.—Magnets. Poles. Magnetization. Declination. Inclination. Compass of declination.

Electricity.—Development of electricity by friction. Laws of electrical phenomena. Electricity by induction. Electroscopes. Electrophores. Electric machines. Condensers. Electrometer condensers. Leyden jars. Batteries. Atmospheric electricity. Lightning. Lightning-rods. Experiments of Galvani and Volta. The pile. Accumulators. Electrical currents. Physiological, mechanical, physical and chemical effects. Galvanoplastic, electro-gilding, electro-silvering. Experiments of Œrsted. Construction and uses of galvanometers. Solenoïdes. Comparison of a solenoïde and a magnet. Magnetization by currents. The electromagnet. The telegraph. Induction. Apparatus of Clarke and Ruhmkorff. Telephones.

Acoustics.—Production and propagation of sound, velocity, intensity, pitch, vibration.

Optics.—The propagation of light. Emission and waves of light. Umbra and penumbra. Laws of reflection. Spherical, concave and convex mirrors. Radiation of heat. Refraction. Prisms. Lenses. Magnifying glasses. Astronomical telescopes. Compound microscopes. Newton's telescope. Principles of photography. Dispersion of light. Spectrum analysis. The solar spectrum.

CHEMISTRY.—GENERAL NOTIONS.

The General Idea of Chemical Phenomena.—Simple and compound elements. Metalloids and metals. Different states of matter. Dissolution. Crystallization. Dimorphism. Polymorphism. Isomorphism. Isomerism. Allotropy. Laws of definite proportions. Laws of multiple proportions. Laws of Gay-Lussac. Law of specific heat. Chemical equivalents and atomic weights. Oral and written nomenclature. The usage of the notation of equivalents and of atomic formulæ.

Oxygen.—Mode of preparation. Physical and chemical properties. Ozone. Combustion.

Hydrogen.—Mode of preparation. Physical and chemical properties. Physical and chemical properties of water. Analytical and synthetical methods employed for establishing its composition. Drinking waters. Oxygenated water.

Nitrogen.—Atmospheric air. The quantity of oxygen and nitrogen in atmospheric air. Protoxide and bioxide of nitrogen. Preparations, properties, analysis. Nitrous acid and hyponitric acid. Nitric, anhydride and hydrate. Preparation and purification of nitric acid. Properties. Ammonia. Circumstances under which this compound manifests itself. Preparations, physical properties of ammoniac gas, its analysis.

Phosphorus.—Preparation. Physical and chemical properties. Red phosphorus, its uses. Combination of phosphorus with oxygen. Phosphoric, anhydrite and hydrate. Preparation and properties of the different hydrates formed by phosphoric acid. Phosphuretted hydrogen gas, liquid and solid.

Arsenic.—Preparation and properties. Arsenious and arsenic acid. Arsenetted hydrogen. The apparatus of Marsh.

Sulphur.—Extraction and purification of sulphur. Physical properties. Different modifications which test its action under the influence of heat. Chemical properties and usage. Sulphurous acid. Preparation; physical and chemical properties. Sulphuric and hydride acid, of Nordhausen and of commerce. Preparation and properties of these different acids. Sulphurous anhydride acid. Preparation and properties. Bi-sulphur of hydrogen.

Chlorine.—Preparation; physical and chemical properties. Different applications. Oxygen compounds of chlorine. Hypochlorous acid. Hydrochloric acid. Preparation, properties, analysis, synthesis. Aqua regia.

Bromine.—Bromine, iodine and fluorine. Hydrobromic, hydriodic and hydrofuoric acids.

Borax.—Boric acid.

Silica.—Silicic acid and fluor spar.

Carbon.—Examination of its different varieties. Oxide of carbon and carbonic acid. Preparations. Physical and chemical properties. Composition. Combinations of carbon with hydrogen. Acetylene. Carburetted hydrogen. Bi-carburetted hydrogen. Olefiant gas. Marsh gas, fire damp, Davy's lamp, illuminating gas, flame. Carbonic di-sulphide.

Cyanogen.—Cyanhydric acid.

Résumé.—Classification of metalloids in their natural families.

Metals in General.—Their properties and classifications. Alloys. metallic oxides; general preparation of metallic oxides; potassium, soda and lime; sulphides; chlorides; sea salt.

Brief Notions Concerning Metallurgy.—Iron, brass and steel; lead and copper. Tin and zinc. Silver. Aluminum.

Salts.—Their general properties. The laws of Berthollet. General notions in regard to the ordinary metals.

HISTORY OF FRANCE. From the time of Henry IV. to 1875.

Henry IV. The Edict of Nantes. Sully. Louis XIII. Richelieu. War against the Protestants and nobility. Thirty Years' War. The peace of Westphalia. Louis XIV. Mazarin and the Fronde. The treaty of the Pyrenees. Personal government, foreign relations. Treaties of Aix-la-Chapelle, Nimegue, Ryswick and Utrecht. Interior government; finances; industry; commerce, and Colbert. Military organization: Louvois. Vauban. Revocation of the Edict of Nantes: its political and industrial consequences. Letters, arts and sciences in the XVII. century. Louis XV. Law's system. Wars of succession in Poland, of succession in Austria. The Seven Years' War. Dupleix and Bourdonnais. Choiseul. First Division of Poland. Louis XVI. Turgot's Ministry. The Parliaments and the royal power. The war in America. Founding of the United States. The French Revolution. The *States General.* The constituent and legislative assemblies. The Convention. Trial of Louis XVI. Girondins and the "Mountain." The ninth of Thermidor. Exterior events. Valmy. Jemmapes. Fleurus. The second and third division of Poland. The Directory. Bonaparte in Italy. Campo-Formio. Expedition against Egypt. Consulate. Civil Code. Concordat. Peace of Luneville and of Amiens. The Empire. The European coalition. Campaigns against Germany and against Prussia. The war in Spain. Expedition against Russia. Campaign in France. The First Restoration. Louis XVIII. and the Charter of 1814. The One Hundred Days. Waterloo. The Second Restoration. Charles X. Navarin. Taking of Algiers. The July ordinances and days. Louis Philippe. The February Revolution. Second Empire. Crimean, Italian and Mexican wars. War against Prussia. Proclamation of the Republic. Letters, arts and science during the first half of the nineteenth century. Geographical discoveries. Progress of commerce and industry. Treaty of Frankfort. The Commune. The Presidency of M. Thiers and of Marshal MacMahon. Constitution of 1875.

(A thorough study is required of the treaties which have been made with foreign powers, and their economic consequences.)

GEOGRAPHY.

Object and usefulness of this study. Geographical nomenclature. Division of the surface of the earth into land and water. Continents. Principal seas. The usefulness of map drawing in the study of geography.

France.—Extent and population. Sea coast and land boundaries. Description of the Pyrenees, Alps and Jura. Neighboring States. Interior mountains. Cevennes, the mountains of Charolais, Cote-d'Or, plateau of Langres, mountains of Faucilles, Jura, mountains of Auvergne, and of Limousin, Morvan. Mountains of Normandy, of Brittany, of Aragon and Ardennes, and Vosges. The general outlines of the separation of the waters, and the division of France into water-sheds. Basins of the Seine,

of Loire, of Garonne, and of the Rhone. Description of these rivers. Tributaries. Principal cities situated on their banks. Secondary basins. The basins of the Scheldt, of the Meuse, and of the Rhine (French part), these studied in the same manner as the preceding. Division of France into departments. Administrative division. The principal railroad systems. Principal canals.

Algiers.—Physical and political description, situation, boundaries, the Tell, high plateaus, the Sahara.

The French Colonies.—In America, in Africa, in Asia, in Oceanica.

Countries under French Protection.—In Africa and in Asia.

Europe.—Physical and political description of the principal countries of Europe, capitals, seaports, principal cities, frontiers of British Isles, of Belgium, of the Netherlands, of the German Empire, of Switzerland, of Austria, of Russia, of Spain, of Portugal, of Italy, of Greece, of Turkey in Europe, of the Danube principalities, of Sweden, of Norway, of Denmark.

Asia.—Principal countries, their boundaries, mountains, rivers, principal cities. Empire of India. China, Japan.

Africa.—Principal countries, their boundaries, mountains, rivers, principal cities.

North America.—United States, Canada.

Central America.—Principal countries.

South America.—Brazil, Uruguay, Paraguay, Argentine Republic, Chili, etc.

Oceanica.—Australia, New Zealand, the possessions of Holland and Spain.

DRAWING.

Figure, decoration, flowers, landscape, animals. Studies from casts and from nature. The reproduction of different objects within a fixed space of time. Reproduction of objects from memory. Linear drawing. Architectural drawing. Wash-coloring.

PENMANSHIP.

Theoretical and practical exercises in the different styles of penmanship. Numerous exercises in writing a running hand.

LIVING LANGUAGES.

Themes, translations, practice in conversation.

Programs of the Regular Courses in the School of Higher Commercial Studies.

TABLE OF EXAMINATIONS HELD AND MARKS TO BE OBTAINED DURING THE ACADEMIC COURSE.

SUBJECTS OF INSTRUCTION.	NUMBER OF LESSONS PER YEAR *		EXAMINATIONS.						
			FIRST YEAR.			SECOND YEAR.			
			Special Examinations.		Marks in Oral Examinations at end of the Year.	Special Examinations.		Marks of the final Examination.	Total.
	First Year.	Second Year.	Written.	Oral.		Written.	Oral.		
Commerce and Accounting	120	120	2	6	3	2	6	10	29
First Foreign Language †	165	165	. .	7	3	. .	7	9	26
Second Foreign Language †	100	100	. .	7	2	. .	7	8	24
Mathematics	50	25	. .	6	3	. .	5	8	22
Study of Merchandise	60	40	. .	5	2	. .	4	7	18
Tests and Analyses	12	13	. .	. .	1	. .	. .	3	4
Commercial Geography	40	45	. .	4	2	. .	4	7	17
Commercial History	. .	20	. .	. .	. .	. .	1	3	4
Elements of Public Law and of French Civil Law	25	. .	. .	2	. .	. .	. .	2	4
Commercial, Maritime and Industrial Legislation	35	50	. .	2	2	. .	3	6	13
Foreign Commercial Legislation	. .	20	. .	. .	. .	. .	1	2	3
Political Economy	30	. .	. .	1	. .	. .	. .	4	5
Labor Legislation	. .	10	. .	. .	. .	. .	. .	2	2
Financial and Customs Legislation	. .	25	. .	. .	. .	. .	2	3	5
Study of Transportation	. .	16	. .	. .	. .	. .	1	3	4
Study of the Means of Commerce (motors, telegraph, telephone, harbors, railroads, etc.)	. .	20	. .	. .	. .	. .	1	3	4
Penmanship	20	15	2	. .	. .	2	. .	. .	4
Total	657	684	4	40	18	4	42	80	188 ‡

MINISTERIAL INSTRUCTION.

III. It was not the intention of the committees who revised the program to avoid repeating all the head titles; it is expressly intended each time that the same subject should appear in the different courses but

* Each lesson, except the lessons in language and penmanship, last one hour and twenty minutes.

† In foreign languages, the mark given on the day fixed for the special examination, is the average of the marks on compositions and questions which have been written since the last special examination.

‡ Each year a mark from 0 to 20 is given for care in keeping their note-books and bookkeeping books. The sum of the marks thus obtained comprises the marks for department intended by the Ministerial Order of July 27, 1891, and amounts to $198 \times 20 = 3960$.

should not be treated by each professor, except from the standpoint of the special instructions which he is to give.

The same distinction should also be present in the mind of the examiners for graduation, in the questions on those subjects which are found simultaneously prescribed in the various programs.

REGULAR COURSE.

Commerce and Accounting.— Two years—First year, 120 lessons; second year, 120 lessons.

Instruction in the Ideas of Commerce, of Arithmetic, and of Algebra Applied to Commerce, and of Accounting Should be Simultaneous.—It should be at the same time theoretical and practical, and the professors should make use of numerous practical exercises.

The course on the explanations of commerce places under the eyes of the pupils specimens of the different commercial documents which they are to study.

In the lessons on arithmetic and algebra, as applied to commerce, one part should always be reserved for practical exercises in rapid calculation, oral and written.

The theoretical explanation of accounting should be accompanied, during the first year, by the practice of keeping a complete set of books, and during the second year by the formation of developed treatises.

I. IDEAS OF COMMERCE AND THE STUDY OF COMMERCIAL DOCUMENTS.

FIRST YEAR.

Commerce.—Of commerce in general, wholesale and semi-wholesale business, retail business, domestic commerce, foreign commerce, importation, exportation.

Persons Engaged in Commerce.—Manufacturers, merchants, bankers, brokers, bucket-shop brokers, remitters, produce brokers, naval brokers, commissioners, agents, those who give warehouse bonds, transportation of commerce, etc.

Exchanges.—Nature of exchanges. Commercial exchange. Buying and selling for cash, with and without discount. Buying and selling on time or on account, with or without interest. The art of buying and selling. General principles. Knowledge of products. Knowledge of affairs. The study of markets and markets for exports. The calculation of expected gain.

Documents Relating to Exchange.—Orders of purchase. Bills of sale. Invoice. Bill. Quittance. Memorandum. Goods on commission. Delivery of goods. Receipt of goods. Sample cards, etc.

Regulations of Exchange.—Of money. Of bank bills. Of paper money. Of checks. Drafts payable to order. Letters of exchange. Mandates. Assignments. Letters of credit. Offsets. Settling accounts, in specie, in bank bills, in paper money, by checks, by clearing accounts.

Transportation.—Transportation by wagon, by railroads, by canals and rivers. Ocean transportation. Packing and shipping goods. Formalities of shipping. Insurance. Tags. Detailed shipping memorandum. Consignment. Different shipping tariffs. Insurance premiums.

Custom Houses and Internal Revenue.—The method of administering the laws relating to customs duties and internal revenue. The system of taxing alcoholic drinks. Permits. Various documents.

Warehouses.—Docks. Common warehouses. Their function. Warrants and receipts. Selling in warehouses. Public selling, etc.

SECOND YEAR.

Bankers.—The usefulness of bankers and of banks of credit. Ordinary bank operations. Discount and collections on commercial paper, invoices, receipts, etc. Banks of deposit. Banks of deposits, of issue, for depositing valuables. Loans on mortgages, on merchandise, on various sorts of liens. Payment of coupons. Opening of credit. Issuing checks, mandates, letters of credit, etc. Bureaus of settlement. A clearing-house. Practical function. Clearing-house of London.

The Exchange.—Its functions.

Produce Exchanges.—Business conducted in them. Cash operations. Time operations. Speculative markets. Averages. Branches; the closing up of branches; options for acceptance, options for delivery, double options, produce quotations. Produce brokers. Bureaus of settlement. Their functions.

The Stock Exchange.—Examination of quotations, government bonds, capital stock, dividends. Bonds. Shares. Goods. Bills payable to bearer. Bills payable to order. Transfers. Conversion.

The different forms of investments. Permanent investments. French bonds (rentes). Foreign public bonds. Bonds French and foreign. Preferred stock. Investments in variable securities. Stock of loan associations, of railroads, of industrial enterprises. The investments in permanent securities and lotteries. Bonds of the Land Credit Bank (Credit Foncier) of France, municipal bonds of Paris, etc. Temporary investments. Time loans. Treasury bonds. Savings banks. Current accounts of deposits in banks. Cash operations. Time operations. Cash and time operations combined. Brisk markets, premium markets; scale of premiums, options; settlements; time loans; delays; discount; rate of settlement.

Insurance.—A practical examination of the different methods of insurance: life insurance, fire insurance, insurance against accident. Insurance on merchandise; maritime insurance.

Business Syndicates.—The grouping of capital in order to carry on commercial, financial, industrial or agricultural operations.

FIRST YEAR.

Ideas Relating to Commercial and Industrial Management.—Organization of a mercantile establishment; order; economy. Of capital necessary for the enterprise. The necessity of carefully determining it. Fixed capital. Circulating capital. Of raw material. Of merchandise. Of production. Of marketing. Of hand labor. General expenses: constant general expenses and variable general expenses. Importance of exact estimation of these expenses. Their influence on the net cost according to the private marks of the person engaged in manufacturing or commerce. Importance of accounts. Knowledge and statistics which they give. Exact determination of the net cost. The permanence of an inventory which is taken. On the conduct of business. The moral and

material conditions which prepare one for success. Of credit and the methods of using it. Publicity; utility; different methods, their advantages and disadvantages. The position of middle-men. The duties of the employe, of the person engaged in commerce or industry, of the administrator, of the silent partner, of the authorized agent, of the stockholder.

II. ARITHMETIC AND ALGEBRA APPLIED TO COMMERCE. (FIRST YEAR.)

Mental Calculation, Rapid Calculation.—Daily exercises. Study of the means of abbreviating arithmetical operations.

Interest, Discount, Commissions.—Definitions of interest. Exercises by the method of numbers and divisors. Exercises by using aliquot parts. Definition of discount. Domestic discount; foreign discount. Average time of payment. Equation of payments. Calculation of bills of discount at different rates. Of commissions. Manner of applying it and calculating it on bills of discount, and collections, and by means of the bank method. Relation of commission and interest: establishment of tables of comparison. Exercises in calculating compound interest.

Accounts Current and Interest.—Definition of accounts current and of interest; calculation by numbers and by aliquot parts. The Hamburg method. Rule for this method. Advantages which it presents. The direct method. The rule for this method with and without interest. Advantages. Method indirect or retrograde. Rule and advantages of this method. Practical exercises in the three methods. Different kinds of accounts current: (1) Accounts current calculated and determined at each change in the rate of interest; (2) Accounts current calculated and determined for fixed periods and at a uniform rate of interest both on the debits and credits; (3) Accounts current calculated and determined for fixed periods at a different rate of interest for the debits and credits; (4) Accounts current calculated and determined after each transaction of the debit or credit. Practical exercises with application of the different commissions and different markets.

The Different Systems of Weights, Measures and Money.—Explanation of the principal systems. Comparison with the metric system. The reduction of foreign money into francs and vice versa. The intrinsic par value, the tabulated value and the commercial value of moneys. Employment of the chain rule.

Of the Net Cost and of the Comparison of Merchandises.—Feigned accounts of purchase and of sale. The estimation of the factors of the net cost. Of the calculation of expenses. Manner of grouping them. Construction of a scale of net costs and manner of using it. Gross comparisons, net comparisons. Comparison of weights. Comparisons of price. The usefulness of these comparisons in order to know whether to buy of or sell to a foreigner. Application of the different operations to merchandise.

Algebra.—The application of algebra to the solution of problems of interest, of discount, of alligation, of partnership, and in the reduction of moneys.

SECOND YEAR.

Operations on the Exchange.—Calculation of cash operations on the exchange: purchases, sales, arbitration of exchanges, calculation of these

operations. Expenses of which it is necessary to take account. Calculation of time operations: purchases, sales, brisk markets, premium markets, combined markets, scale of premiums. Calculation of operations on the produce exchange. Cash operations: purchases, sales, expenses. Time operations: purchases, sales. Branches.

Bank Operations.—The precious metals. Calculation of alloys. Gold and silver quotations. Calculation of the value of an ingot at Paris and at London.

Gold Points.—Comparisons of gold. Comparison of pound sterling, of marks, of florins, of roubels, and of dollars.

Exchanges.—Definition of exchange. Lecture on quotations. Negotiable paper due in three months. Sight drafts. Markets giving variable, and markets giving invariable quotations. Exercises in the calculation of exchanges. Theoretical methods, practical methods. Employment of the chain rule. Application of algebra. Equation of exchanges.

Arbitration.—Definition. The position of the debtor: methods of settling his debt. Position of the creditor. Means of recovering what is due him. Of speculators or arbitrators of exchanges. Calculation of arbitration on the State bonds and other paper on the exchange.

Figure Quotations.—Definition. The usefulness of figure quotations. The quotations of the different markets giving figure quotations at Paris. Problems and operations on the different quotations. Figure quotations in foreign markets. Joined and compared. Calculation of feigned operations.

Orders on Banks.—The separation of orders on banks into two parts: first, orders on foreign banks transmitted to Paris; second, orders on the bank of Paris transmitted to foreigners. Elements of which the orders on banks are composed: first, limited; second, the price of purchase of paper on demand; third, price of sale of drafts. Arbitration and comparison of these three elements. Determination of the profit or loss by the operation. Expenses of which it is necessary to take account in arbitration: stamps, brokerage, transportation, insurance. Detailed statement of the different expenses for the principal financial countries, and expenses which must be added to the price of purchase, or must be deducted from the price of sale.

III. ACCOUNTING.—ELEMENTS AND GENERAL THEORY OF ACCOUNTING. (FIRST YEAR.)

Principal Terms used in Accounting.—Debtor. Creditor. Debit. Credit. Receipts. Expenses. Accounting. Keeping the books. Definitions. Different kinds of accountants.

The Account.—Definition of the account. Manner of disposing of an account. An account which receives and an account which gives out. The cash book taken as an example. Practical exercises. Illustrations of the movements of receipts and expenses. Closing and reopening of cash accounts. Agreement of the account which receives with the account which pays out. Inverse entry of the fluctuations in the respective accounts. Impersonal accounts, representing the wealth, composing the inventory of the enterprise. Personal accounts, representing the debtors or creditors of the enterprise.

The Journal.—Definition. Disposition of the journal. Formula for entries in the journal. Single journal. Divided journal. Different methods of dividing the journal. Auxiliary or analytical journal of the cash transactions, of receipts and of expenses, of bills, of the shop, of the manufactory, etc., and of the transactions by correspondence. General or synthetical journals. Models. Formula of articles recapitulating the transactions of the auxiliary journal to the general journal. Practical exercises with illustrations. The additional usefulness of the auxiliary journal and the general journal.

The Ledger.—Definition. Disposition of the ledger. Single ledger. Divided ledger. General or synthetical ledger, auxiliary or analytical ledger. Models. Relation of the journal to the ledger. Practical exercises in opening accounts and of the relation of entries of the journal in the ledger. Precautions to be taken in order to avoid errors. Agreement of the general journal and the general ledger. Agreement of the general ledger and the auxiliary ledger.

Collective Accounts.—Definition. The usefulness of collective accounts in order to control the collections of the open accounts in the auxiliary ledger, and in order to simplify the balancing of the accounts.

Balancing Accounts.—Definition. Agreement of the entries in the journal and of the accounts in the ledger obtained by balancing accounts. Periodical balances. Daily balances. The advantage of frequent balances. A model for balancing the general ledger, with and without collective accounts. Models for balancing the auxiliary ledger. Models for balancing the general ledger, with methodical classification of the accounts. "Chiffrier-balances." Definition. Their functions, their utility for obtaining balances in enterprises having a great number of accounts. Daily balances obtained by means of the figure balance, whatever the number of accounts.

Division and Classification of Accounts.—The different species of accounts. Necessity of a classification. Mathematical expression for commercial operations. The rational classification which results in: Accounts of nominal capital. Accounts of property by means of which the enterprises are carried on. Accounts of persons both debtors and creditors. Accounts of profits. Permanence of the inventory.

Analysis of the Different Series of Accounts.—Accounts of the nominal capital of the enterprise: Capital stock. Bonds. Reserves. Different amortizations. Accounts of property contained in the inventory by means of which the enterprises are carried on (net cost of this property):

a. Fixed Properties: Stock in trade. Shares. Expense of settlement. Licenses. Realties. Personal property. Material.

b. Movable Properties: Money. Bills receivable. Various kinds of paper. Raw material. Stock on hand.

c. Property Actively Engaged: Manufactures. Buildings. Speculations. Joint accounts. Joint stock companies. Agencies. Lands, etc. Debit and credit accounts of persons (at the price of sale or of purchase). Accounts of profits (debits or credits of the differences between the net cost and the selling price). Accounts of sales. Accidental gains and losses. Results of the different operations. General expenses. Statement of the cost of management.

Inventory. Balance Sheet.—The inventory balance with the classification of the account. Taking an inventory of the assets. Balance sheet. Book of balances. Book of inventories.

APPLICATIONS.—TREATISES. (SECOND YEAR.)

The Arrangement of Books and of Accounts.—The general principles of arranging the books and accounts of capitalists, of persons engaged in commerce, industry and agriculture. The opening of books of different societies; firms; joint stock companies or corporations; limited joint stock companies; co-operative societies; civil societies; mutual aid societies; partnerships. The function of the nomenclature of the various series of accounts. The advantage of a certain order of accounts in each series.

Private Accounts.—An inventory giving the composition of the capital on beginning the business. Opening of accounts made to conform to this inventory and in the order of a rational classification. Operations comprising a certain period: expenses, receipts, purchase and sale of shares, management of real estate, a business having one partner who has unlimited responsibility, etc. Inventory of the assets to determine the condition of the capital at the close of management. Balance sheet.

FIRST YEAR.

Commercial Accounts.—Inventory giving the composition of the capital at the beginning of the undertaking. Opening of accounts made to conform to this inventory, and in the order of a rational classification. A series of commercial operations comprising purchases, sales, returns, different rules concerning cash payments, time transactions, and giving credit; consignments, partnership affairs, current account with a bank, etc. Function of the account of purchases, of account of stock, of account of sales. General expenses. Statistical abstract of these expenses, partly in the auxiliary ledger, partly by means of a synoptical table. Apportionment of the general expenses in the account of purchases. Annual amortization of the fixed capital. Inventory of accounts to determine the condition of the capital at the close of the undertaking. Balance sheet. Inventory book.

SECOND YEAR.

Industrial Accounts.—Inventory giving the composition of the capital at the beginning of the enterprise. Opening of accounts made to conform to this inventory, and in the order of a classical classification. Arrangement of the books and of the entries, because of the division of industrial labor, and in order to obtain in a methodical way the net cost of the manufactured objects.

Purchases of raw material in France or in foreign countries. Accounts of purchases and accounts of stock of raw material debited at the average net cost of the purchases.

Manufacture or successive transformation of raw material. Accounts of manufacture (an account of manufactures for each step of the transformation of material). Periodical apportionment of the raw material, of the hand labor and of the general expenses in the account of manufacture. Determination of the co-efficient of apportionment of the general expenses. *Manufactured Objects:* accounts of the manufactured objects in the warehouse; placing these objects in the accounts of manufacture at the ultimate net cost. *Sales:* account of sales, debited at the net cost, credited at the price of sale. Other accounts of profits: accidental gains

and losses, results of the different operations, commissions, etc. *Closing the Undertaking:* the inventory of material, of personal property, of fixed property, of the cash on hand, of bills, of raw material, of material in the course of manufacture and of manufactured products. The different amortizations. Inventory of the accounts. Settlements. Determination of the results and of the condition of the capital at the close of the enterprise. Balance sheet. Inventory book.

Treatises.—Accounts of a bank with accounts relating to the operations of purchase and of sale, of bullion, of exchanges, of arbitration, of the issuing of shares, of financial partnerships. Accounting of a commissioner. Bookkeeping of a ship owner. Principles of bookkeeping of a railroad company, of an insurance company, of a savings bank. Principles of agricultural bookkeeping.

Diagrams of Accounting.—The execution by the pupils of synoptical tables, summing up the classification and the function of the accounts of the different sorts of bookkeeping. Comparative study of these diagrams and of balance sheets.

COMMERCIAL CORRESPONDENCE. (FIRST AND SECOND YEARS.)

The necessity of carrying on business by correspondence in order to be able to trace the different operations. Style of commercial correspondence. Exercises. Registering and classifying of mail trains. Copy of letters and a book of departure of mail trains. Book of postal rates.

FOREIGN LANGUAGES. (TWO YEARS.)

Table A	English, German	First Year	165 lessons.
		Second Year	" "
Table B	Spanish, Italian	First Year	100 lessons.
		Second Year	" "

The pupils must give proof at the entrance examination that they are able to translate readily English, German, or Spanish. They continue in the school the studies which they have commenced, and are required to learn at least two languages, being allowed their choice, one from each table. The lessons are given in the accounting rooms in groups of from ten to twenty-five pupils. In the second year a large part of the commercial correspondence is carried on in a foreign language.

MATHEMATICS. (TWO YEARS.) First Year: Fifty lessons.

Simple Interest.—General formula. Methods of numbers and divisors, of the aliquot parts of the interest rate, of the aliquot parts of time, of the aliquot parts of capital. Separation into proportional parts. Rules of partnership.

Discount.—Different kinds of discount. Solution and discussion of the different problems in discount. Discount at the bank of France. Method of Thoyer. Improvements introduced by Cauchy.

Accounts Current and Interest.—Brief examination of the three methods: First, direct; second, indirect or retrograde; third, Hamburg, or by scale.

The Precious Metals and Monetary Systems.—Alloys; problems relating to alloys. Moneys, manufacture, allowance; monetary system of

France; of the Latin union; monetary systems of those countries which do not form a part of this union. Relative value of gold and silver: First, the legal relation; second, commercial relation.

Operations on the Exchange.—The modes of issuing government loans. National subscriptions. State bonds. The ledger of the public debt. Floating and consolidated debts. Treasury certificate. The budget. Amortization. Conversion. Stocks. Bonds of railroads and other companies. Dividends. The Exchange of Paris. Brokers. The different paper quoted. The bank stock. The course of exchange. Bank rate. Brokerage. Guarantees. Taxes. Stamps. Cash operations. Investments. Sales of financial paper. Arbitration of the different bills of exchange. Definite time of sales. Discount. Time sales and at a premium. Options. Settlement. Prolongation or backwardation of cash payments. Prolongation from one settlement to another. Combinations of the different operations, on short term and at a premium. Scale of premiums. The commercial exchange. Business transacted at the Exchange of Paris. Branch establishments. Closing up branch establishments. Method of settlement. Options for acceptance. Options for delivery. Double options.

The Exchange.—Definition of the exchange. Its origin. Bills of exchange. Domestic exchange. Foreign exchange. Checks. Deposits. Long time and short time paper. Discount. Exchange quotations. Markets which give a fixed, and markets which give a variable quotation. Explanation of the exchange quotations of Paris, and of the quotations of markets of foreign exchangers. Definition of arbitration. Direct and indirect arbitration. Explanation and application of the chain rule. The construction of comparative tables. Numerous exercises in arbitration between the markets of Paris, London, Amsterdam, Berlin, etc. Arbitration of metals, principally between the markets of London and Paris. Arbitration of public bonds. Prolongations.

THEORY OF LONG TIME FINANCIAL OPERATIONS.

Compound Interest.—Definition and fundamental formula. Study and discussion of the two conditions according to which one is able to estimate the value of an investment at compound interest, when the time is expressed by a fractional number. Generalization of the theory of exponents. Ideas concerning equivalent rates. Formula of exponents applicable to every case. Formula for present interest and for continued interest applied by the French and English stockholders. General solution of problems in compound interest. Practical calculation. The use of logarithmic tables and the numerical tables of Violeine, Pereire, etc. Rule for computation. Investigation of the time necessary for capital to double, triple, etc., when placed at compound interest. The present worth of capital due at a future time. Discount. Different methods of discount. Comparison and discussion. The equated time of payment of several sums maturing at different dates and reckoned at compound interest.

Consols.—Annuities.—Periodical Payments.—Definitions and examples. Distinction of limited or perpetual consols. Immediate or differing. Paper, due at a fixed time, and at a rate of interest determined by certain periodical payments. The settlement of a definite capital by annuities. General formula for annuities. Computation of the different elements. The special study of the difficulties which present themselves in discovering a rate in problems in annuities. Algebraic solutions and approximate

practical solutions. Formula of F. Baily and Makeham, etc. The annuities or consols of indefinite maturity. Study of the principal cases. Consols varying according to the law of arithmetical or geometrical progression.

The Amortization of Loans by Annuities.—General relations of the capital, the annuity, rate of interest and time. Relation of the rate of interest to the rate of amortization. Formula and tables. Public loans contracted by issuing bonds. Construction of tables by amortization. Study of the different complications which one must encounter in practical amortization. Numerous examples taken from the public loans contracted partly in France and partly in foreign countries. The choice of problems in financial operations of long dated bills.

Probabilities.—Chances and Risks.—The elementary ideas of the computation of chances. Public lotteries. The actual value of a sum whose payment is doubtful. Compound probabilities. Repetition and proofs. Law of great numbers. Theorem of J. Bernoulli. Application of the principles of the calculation of probabilities to the study of the laws of human mortality. Probable duration of life. Probability of living. Study of the risks of property and of merchandise.

SECOND YEAR : (twenty-five lessons) APPLICATION OF THE MATHEMATICAL THEORY OF FINANCIAL OPERATIONS.

The Stocks and Bonds of France and of Foreign Countries.—Historical sketch of the public bonds of France. State consols. Issuing. Negotiation. A precise computation of the relation of the different types of consols. Perpetual consols and consols which may be amortized. Calculation of equivalents. Study of the public bonds in foreign countries, England, Germany, America, etc.

Commercial Bonds.—Railroad Companies.—The financial relation between the State and the large railroad companies. The agreements from 1859 to 1868, and ultimate modifications. The net reserve. The mechanism of the wear and tear. Guaranteed interests and subsidies allowed by the State. Agreements of 1883. Its results on the value of price of the bonds and stocks of the railroads. Capital stock and dividends. Study of the different questions relating to the dissolution of an industrial company.

Lottery Loans.—Special study of the loans of the city of Paris. Application of the principles of the calculation of probabilities in estimating the chances of a lottery and of the chances or risks of repayment. Analysis of the different systems of lottery loans practiced in France and in foreign countries.

Financial Operations on a long term of Credit by the large Establishments of Credit.—Societies of landed credit (credit foncier). Laws and operations of the landed credit of France. Conditions of mortgage loans and of loans granted to the communes and departments. Land bonds and communal bonds. Mortgage banks in Germany, Austria and Hungary (Renten-Rechnung bei anticipativer Verzinsung). The landed and agricultural credit of Algiers. Colonial landed credit. Study of the operations of the societies for landed credit in the other countries.

Operations of the Chief Bank Relating to the Public Issue of Bonds.—The issue of bonds on the representation of the loans granted by the large establishments of credit. Conversion of a certain loan into

another loan, of which the conditions of interest and amortization are different. Distinction between nominal and real capital, between nominal and real rate of interest. The net cost of bonds and the profits to the banker contracting the loan. Average price according to a certain rate of the bonds, stocks, etc., of a certain loan at a certain period, and taking account of all the conditions relating to the payment of interest, the price and premiums of repayment.

Operations of Insurance Companies.—Exposition of the mathematical principles on which are based the tariffs of insurances, on persons and on merchandise. Insurances against fire, against loss by transportation and against accidents of every nature. Life annuities on one or more persons. A critical study of the ancient and of modern methods of calculation which serve as a base for fixing the tariffs. Insurances in case of death. The termination of the single premium, and of the annual premium. Mixed insurances. Insurances for a definite period. Life consols. Reserves of insurance companies. Insurances guaranteed by the State. Pension banks. Special conditions and tariffs. Mutual aid societies. A brief analysis of the principal works published either in France or in foreign countries on a mathematical theory of financial operations.

STUDY OF MERCHANDISE (TWO YEARS). FIRST YEAR (sixty lessons).

PRECIOUS STONES.—Diamonds and precious stones. Origin, places of production. Prospecting. Properties. Uses. Commerce.

COMBUSTIBLE MATERIAL.—Definition. Industrial importance.

Combustible Solids.—Natural vegetable combustibles (wood, tan-bark peat). Natural mineral combustibles (lignite, coals, anthracite). Combustibles derived from vegetable and mineral combustibles (charcoal, peat, coal or coke, conglomerates).

Combustible Liquids.—Petroleum, oils of talc.

Combustible Gases.—Coal-gas, oil-gas, water-gas. Sub-products: Tar and ammoniac waters, etc. Products and coloring matter derived from tar (for each of these matters the process of extraction and manufacture is explained, the kinds, their uses, the production, and the commerce; statistics of importations and exportations, etc.).

CHEMICAL PRODUCTS.—*Raw Materials.*—Sulphur and pyrites. Chloride of sodium (marine and rock salt). Chloride of potassium. Nitrate of soda, or saltpetre of Chili. Sodium borax. Origin. Extraction. Use. Commerce, importations, exportations, etc.

Acids.—Sulphurous acid. Sulphuric acid. Nitric acid. Hydrochloric acid. Boric acid, etc. Processes of manufacture. Uses. Commerce.

The Alkalies.—Potassium and potassium salts. Soda and the salts of soda. Ammonia and salts of ammonia. Processes of manufacture. Use. Commerce.

Other Chemical Products.—Alums and salts of alums. Phosphorus and products which are connected with it. Carbonic di-sulphide. Chloride of lime. Sulphites and hypo-sulphites used in bleaching. Iodine and iodides. Bromine and bromides. Explosive materials: powders and dynamites. Processes of manufacture. Uses. Commerce.

Fertilizers and Means of Improvement.—Definition. The theory of fertilization. Vegetable, animal and mineral fertilizers. Chemical fertilizers. Means of improvement. Extraction. Manufacture. Commerce.

VEGETABLE OR ANIMAL PRODUCTS USED IN THE ARTS AND INDUSTRY.—Essential oils and essences. Sweet-scented waters. Extracts. Preparation. Applications in perfumery. Commerce. Concrete essences. Camphor. Extraction. Commerce and use (celluloid). Soft resin or balsams. Extraction, use, commerce. Dry resins: amber, lake-gum, copal-gum and damir-gum. Extraction. Commercial varieties. Employment. Varnish. Resinous gums. Caoutchouc and gutta-percha. Extraction. Commercial varieties, use, commerce. Coloring matters of vegetable and animal origin. Commercial varieties. Commerce. Use. Coloring of thread and tissues. Impression.

MATERIALS USED IN BUILDING.—Division into natural and artificial materials. Statistics given.

Building Stones and Stones Used for Ornament.—Quarries. Quarrying. Preparation. Principal varieties. Use.

Bricks.—Tiles. Paving-tiles. Other materials made from baked clay for building purposes. Process of manufacture.

Mortars and Concretes.—Lime. Cements. Preparation. Test.

Plasters.—Gypsum. Qualities. Preparation and use. Stucco. Different kinds of cement.

Woods.—Forest statistics. Exploitation of forests. Properties, qualities and defects of wood. Causes of destruction, and means of conservation. Different essences. Employment: in shipbuilding, timbers, constructing railroads, telegraph poles, of props for mines, lumber, fuel, carpentry and cabinet making, etc. Commerce of wood.

METALS.—*Iron Mines.*—Tests and treatment.

Brass.—Varieties and physical properties.

Iron.—Refining and manufacturing.

Steel.—Processes of manufacturing and testing.

Manganese: Natural state.—Preparation. Oxide.

Chromium, Nickel and Cobalt.—Mines. Extraction. Uses of chromates. Nickel-plating. Cobalt blue.

Zinc.—Mines. Extraction and preparation of zinc. Important uses. Flowers of zinc.

Tin.—Ore. Mines. Metallurgy. Properties of the metal. Numerous applications.

Copper.—Mines. Production. Roasting and testing of the ore. Metallurgy. Industrial alloys.

Lead.—Principal mines. Extraction. Use. Salts and oxides. White lead. Litharge.

Antimonium.—Extraction and uses.

Arsenic.—Extraction and uses.

Cadmium.—Alloys. Applications and photography. Yellow cadmium.

Bismuth.—Preparation. Properties. Fusible alloys.

Magnesium.—Manufacture.

Aluminum.—Extraction. Aluminum bronze.

Mercury.—Mines. Applications. Mirrors. Gildings.

Silver.—Ores. Places of production. Extraction. Alloys. Tests. Importance of this metal.

Gold.—Mines. Nuggets. Oriferous sand. Extraction. Monetary alloys.

Platinum.—Extraction. Properties. Uses.

Calculation of the value of different minerals of commerce, the estimation of the approximate value of a mine in the process of exploitation, or one which has just been discovered.

SECOND YEAR (forty lessons).

OLEAGINOUS SUBSTANCES AND INDUSTRIES WITH WHICH THEY ARE CONNECTED.—*Oleaginous Substances.*—Definition. Production. Physical and chemical properties, classification.

Oleaginous Substances of Vegetable Origin.—Oleaginous seeds and fruits. Extraction of fixed vegetable oils. Study of the principal vegetable oils. Properties. Uses. Production. Commerce. Importations, exportations.

Oleaginous Substances of Animal Origin.—Strictly animal oils, neat's-foot oil, sea-animals, fishes. Extraction, properties, uses. Commerce. Fats. Properties. Classification. Commercial varieties. Production. Extraction. Use. Commerce. Spermaceti, animal and vegetable waxes. Production. Use, commerce, manufacture of soap, varieties, commerce, importations, exportations, stearine candles, tallow candles, wax candles, etc. Manufacture. Commerce. Sub-products. Acid oils. Glycerine. Uses. Commerce.

Vegetable Products Used as Medical Stimulants, Condiments or Foods.—Pharmaceutic products (cinchona, quinine, opium, etc.). Method of gathering, of extraction. Employment, commerce. Tobacco. Coffee. Tea. Cocoa. Spices.

Fruits and vegetables (processes of conservation).

PRODUCTS OF MINERAL ORIGIN.—*Glass Making.*—Raw material. Window panes. Mirrors. Decanters. Showcases. Venetian glass. Bohemian glass. Hardened glass. Glass bottles. Crystal. Lenses. Strass. Artificial stones. Manufacture and work in glass. Cutting and engraving. Economic condition; centres of productions, etc., etc.

Ceramics.—Clay; Kaolin; feldspar. Porcelains. Crockery. Biscuit. Stoneware. Common pottery. Baked earth. Bricks. Tiles. Pipes. Flower-pots. Ornamental tiles. Commercial varieties. Manufacture and economic condition.

PRODUCTS OF THE ANIMAL CARCASS.—I. HARD SUBSTANCES.

Bone.—Treatment and utilization.

Horns.—Deer, antelope, moose, etc.

Horns.—Varieties. Methods of working. Hoofs. Claws, etc. Smoothing the horns.

Shells.—Gathering. Working. Varieties.

Animal Weapons.—Ivory. Tusks of: elephant, hippopotamus, walrus and sperm whale.

Articles of Paris.—Buttons, combs, toy-trade, etc.

II. SOFT SUBSTANCES.

Skins.—Tanning substances. Green hides. Tanning of sole leather and of very soft leather. Currying. Commercial varieties. Tanning of Hungarian leather. Tawing. Chamois. Morocco. Special leathers: varnished, shagreen and shark skins. Parchment. Furriery. Leather objects.

Manufacture of Glues.—Material for glue. Glues of Rouen, of Flanders, of Givet, of Alsace, of Germany, of Paris, etc. English glue. Fish glue. Preparation and uses.

Feathers.—Preparation. Working. Coloring. Commercial varieties.

Textiles of Animal Origin.—Hair. Hair of the goat. Hair of rabbits and hares. Manes. Horses. Bristles of hogs and of wild hogs. Vegetable mane. Brush-making.

Silk.—Silk-worm. Cultivation. Diseases. Winding off silk. Silk throwing. Coloring. Commercial varieties.

Woolens.—Classification. French and foreign woolens. Work in woolens.

PRODUCTS OF VEGETABLE ORIGIN. *Textiles of Vegetable Origin.*—Flax. Hemp. Retting and Stripping. Abaca. Jute. Phormium. Cotton. Grass cloth plant. Cultivation. Gathering. Varieties.

Spinning and Weaving of the Principal Textiles.—Numbering of threads. Centres of production and consumption. Economic conditions. Tissues. Simple stuffs, stuffs of armorial design, of artistic design, ribbed stuff, stuff having sinuous threads, and stitched stuffs. Looms. Winding on spools. Felts. Draperies.

Paper.—Raw material. Paper made of rags and of straw. Chemical wood pulp, mechanical wood pulp. Preparation. Ruling. Commercial varieties. Paper money. Paste-board, filter paper, wrapping paper, industrial varieties. Card-board. Plain cards. Bookbinding paste-board. Parchment paper. Painting paper. Fantastic paper. Printing paper. Engraving. Bookbinding paper.

Food Substances.—Cereals. Wheat, rice, corn, rye, barley, oats, sorghum, millet. Distinctive characteristics. Composition. Cultivation. Commerce. Grinding. Panification. Pastries. Legislation. Economic condition.

Sugar.—Cane. Beet-roots, varieties. Extraction of the sugar juice. Treatment. Raw sugar. Varieties and commercial uses. Sugar refining. Lump, fruit, sugar candy, etc. Molasses, glucose, etc. Legislation. Markets. Economic condition.

Drinks.—*Wines.*—Vineyards, cultivation, diseases. Preparation of red, white and sparkling wines, of liquors, of dried raisins, etc. Manufacturing wine. Sugaring. Anchoring. Fertilizing with plaster. Commerce, etc.

Beer.—Varieties. Manufacture.

Cider.

Alcohol.—Distillation. Alcohol of beet-roots, of grains, of potatoes, of molasses, etc.

Vinegar.—Acetic acid.

Legislation relating to beverages and the economic condition.*

TESTING MERCHANDISE, ANALYSIS.—ADULTERATIONS.—(Two Years.)

FIRST YEAR: Twelve Lessons.

Test of combustibles, coals, petroleum.

Test of potash, of soda and saltpetre.

Testing chalks, bleaching chlorides, manganese.

Testing fertilizers. Nitrogen. Phosphoric acid.

Analysis of bronze, of brass, of iron ore.

Determination of lead compound with tin. Testing matter containing gold with a touch-needle. Testing of matter containing silver.

Analysis of drinkable and non-drinkable waters.

* All the commercial products which are not mentioned in this brief sketch are treated along with related or derived products.

SECOND YEAR (thirteen lessons).

Testing of oils. Determination of the amount of oil in oleaginous grains.

Analysis of soap.

Testing of textiles.

Testing of flour, meal, etc.

Testing of sugar, of bone-black.

Analysis and adulteration of wine, of beer.

Testing of milk, of butter.

Testing of coffee, chocolates, spices.

CHEMICAL MANIPULATIONS.—FIRST AND SECOND YEARS.

The lessons on merchandise and raw material are completed by manipulations in the chemical laboratory, in order to make observations under the microscope, in order to discover the frauds to which the different commercial products are liable, as textile material, foods, fertilizers, etc.

COMMERCIAL GEOGRAPHY.—(Two Years.)—CHARACTER OF THE COURSE.

The course in economic geography treats of the following matters for each country:

1. A brief conception of the territorial formation. Population. Ethnographical ideas. Languages. Religions. Political institutions. Principal administrative divisions.

2. General configuration and nature of the soil. Climates.

3. Agricultural products. Cattle raising. Exploitation of forests. Agricultural regions. Hunting and fishing.

4. Mineral products. Mines and quarries. Salt mines. Mineral resources. Salt marshes.

5. Manufactured products. Centres of industry. Their origin: *raison d'etre.*

6. Ways of communication. Both small and large navigable rivers. Canals. Railroad routes. Maritime navigation. Seaports. Merchant marine. Navigation companies. Postal services. Telegraph service.

7. Foreign commerce. Principal markets. Various reasons for their prosperity. Importations and exportations. Usages of commerce. Special study of the commerce of each country with France, and of the competition which French commerce encounters.

8. Systems of customs duties. Commercial treaties. Weights and measures. Moneys. Institutions of credit.

9. Social condition. The manners and national character.

FIRST YEAR (forty lessons).

Europe.—France. British Isles. German Empire. Netherlands. Belgium. Alsace-Lorraine. Switzerland. Austro-Hungary. Spain, Portugal. Italy. Danube States. Baltic peninsula. Greece. Russia. Scandinavian countries.

The French in Northern Africa.

Algiers.—Physical and economical geography, inhabitants, land divisions, public works, administration, budget, system of customs.

Tunis.—Development of colonization, of agriculture and of commerce, system of customs and treaties of commerce, taxes, function of the Protectorate. Religious question and the questions indigenous to Algiers and to Tunis.

SECOND YEAR (forty-five lessons).

I. *Africa.*—General notions. Explorations. The European conquests. Berlin Congress of 1885. Treaties of 1890. Principal lines of navigation. Region of the Atlas. Regency of Tripoli. Sahara. Islam and their religious confederates. Routes of caravans. Projects of a railroad across the Sahara. Islands of the Atlantic Ocean. Coast of Guinea and the Soudan. Senegal and French Soudan. The Niger and Lake Chad. English company of the Niger. French, English and German settlements on the coast of Guinea. Basin of the Congo, and the Western Coast. French Congo. Congo Free State. Portuguese and West German Colonies. Southern Africa. The Cape and Natal. Orange River Free State. South African Republic. Eastern Africa. Zambese. English South African Company. Mozambique. Great lakes, the English and German companies. Zanzibar. The Somali coast. Gulf of Aden and the Red Sea. English possessions. Obock. Italians in Africa. Abyssinia. Valley of the Nile. Egypt. Suez Canal. Islands of the Indian Ocean. Madagascar. Comoro and Reunion Islands. English possessions.

II. *Asia.*—General notions, races and religions, political divisions, the main routes of land and sea communication. Western Asia. Turkey in Asia and Arabia. Iran Plateau. Persia. Afghanistan. Beloochistan. Asiatic Russia. Caucasia. Central Asia or Russian Turkestan. Siberia. English possessions. Indian Empire. Ceylon. The Straits. French India. Indo-China. Burmah. Kingdom of Siam. French Indo-China. Cochin-china. Cambodia. Anam. Tonquin. Extreme Orient. Empire of China, Corea. Japan.

III. *Oceanica.*—General notions. Principal voyages of exploration. Physical divisions. Malaysia. Possessions of Holland, England and Spain. British Australasia. Australia. Tasmania. New Zealand. Fijii Islands. Possessions of France. New Caledonia. French Settlements in Oceanica. Germans, English, Americans in Polynesia. Hawaiian Islands.

IV. *America.*—General description. Brief history of the discoveries and of the voyages to the North Pole. North America. Political divisions. Principal routes of trans-continental and ocean communication. British possessions in North America. Dominion of Canada. Newfoundland, fisheries. Saint Peter and Miquelon Islands. United States.

Mexico.

Central America. The five republics and British Honduras. Isthmus of Panama. The Antilles.

South America. Venezuela. Colombia and Ecuador. Peru. Bolivia and Chili. Argentine Republic, Paraguay, Uruguay. Brazil. The Guianas.

HISTORY OF COMMERCE. SECOND YEAR (twenty lessons).

Interest and usefulness of this history. Influence of commerce on the civilization and the development of human relations. Sources of

commercial history. Primitive times. The Egyptians. The Phœnicians. The Assyrians. The Persians. India. Greece. Rome and Carthage. Gaul and Germany. The world's commerce at the fall of the Roman Empire. Methods of exchange in ancient times. Shipping of the ancients. Invasions. Commerce at the time of Charlemagne. Fairs and markets. The Arab Invasion. Africa during the Middle Ages. Europe from the twelfth to fourteenth century. Influence of the crusades on the world's commerce. Syria and Egypt. The Italian cities of the Middle Ages. Pisa. Venice. Genoa. Florence. Commerce of France from the eighth to fifteenth century. Fairs of Champagne. Flanders. England and Germany in the thirteenth century. Hanseatic League. Method of exchange employed by commerce in the Middle Ages. Bills of exchange. Banks. Money changes. Commerce of the Orient after the fall of Constantinople. Maritime voyages toward the West. Discovery of a passage to Asia by way of Cape of Good Hope. Discovery of America. Consequences of these two events for the commercial relations of the world. The Renaissance in Europe, Flanders, Italy, France, Spain, Portugal, England and Germany. Settlement of Europeans in India. Phases of the Conquest. Portugese in Asia. Spanish Conquests in the New World. Decadence of Spain. Organization of the Conquest. Principal companies. French and English in India. Colonization of North America by the English and the French. Slavery in the countries conquered by the Western nations. Results of the maritime discoveries. The grandeur of Holland. The changing of commercial routes. The birth of commercial legislation. Colbert and the protective system. The colonial system. The sugar-producing colonies. Financial system of Law. The loss of India and of Canada. Independence of the English colonies of North America. Commercial results of the independence of the United States. The eighteenth century and its economic reforms. Quesnay, Gournay and Turgot. Liberal tendencies in commercial affairs. Treaty of 1786. The French Revolution and its consequences from the standpoint of the development of industries and of commerce. Tariff of 1791. Commercial system of the Empire. The Continental blockade and its results. The protective system under the Restoration. The Corn Laws and the laws relating to animals and metallurgy. The customs policy of Prussia since 1816. Organization of the customs union (Zollverein). Its economic results. The Netherlands, Russia and Sweden. The reform of the customs in Great Britain. Cobden, Robert Peel and the league against the Corn Laws. Influence of the customs reform on the commercial politics of Europe. Revolution of 1848 in France. War of the parties on the ground of import duties. Commercial tendency of the second Empire. The system of commercial treaties inaugurated in 1860. Results of this economic revolution. Development of the ways of communication. International treaties. Extension of commercial relations. The merchant marine. Suez Canal. Economic and social evolution in the countries of the extreme Orient. Commerce of China, of Japan and of India. Australia. Java. Indo-China. America since the War of Independence. Progress of its industry, its agriculture and of its commerce. Its commercial system. Cause of the War of Secession. Economic results of this war. The actual position of the United States from the commercial point of view. Canada. Mexico. Central and South America. The commercial present and the growing importance of the traffic of this

country. Panama. Commerce of Europe since 1870. Scientific and industrial discoveries. International expositions. Resources of the principal countries. Methods employed in making payments among the nations in adjusting their commercial balances. Development of credit, of the means of communication, of financial societies. Banks of issue and of circulation. International values. Clearing-houses. The exchanges. Statistics. The colonizing tendencies of the European nations, their causes. Conditions of international commerce. Its future. Résumé.

THE ELEMENTS OF FRENCH PUBLIC AND CIVIL LAW. FIRST YEAR (twenty-five lessons).

Organization of the public powers; the legislative power; the executive power; the promulgation of laws. The judicial power. Organization of the different judicial bodies, specially the commercial tribunals and the councils composed of employers and employes. Commercial representation. The Superior Council of Commerce and Industry. Chambers of commerce. The project of creating changes of navigation. Consulting chambers of art and manufacture. French and foreign chambers of commerce. Consuls. Of civil rights. On nationality. Of the position of foreigners in France. Of the documents of the civil state. Of domicile. Of marriage. Of parents and of children. Of the parental power. Of minors, of guardianship and of livery. Of disfranchisement and of legal council. Of movable and immovable property. Of property and possession. Of usufruct and of services. Of the different modes of acquiring property. Of succession. Of gifts among the living and of wills and testaments. Of contracts and obligations. Of the validity of contracts. Of the contract of marriage. Of the renting of property. Of depositing property. Of security. Of transactions. Of franchises and of mortgages. Of prescriptions.

COMMERCIAL, MARITIME AND INDUSTRIAL LEGISLATION. FIRST YEAR (thirty-five lessons).

COMMERCIAL LAW.—The general ideas of commerce and of commercial law. The sources of French commercial law. Bibliography.

Commercial Documents.—Reasons for discrimination (competence, validity, etc.).

Persons Engaged in Commerce.—Competency (minors, married women). Obligations and rights. Commercial books, publicity of contract of marriage, licenses, election and eligibility to the chamber of commerce, and tribunals. Competence of the commercial tribunals. Methods of procedure. Arbitration.

Societies.—General ideas. Civil and commercial societies. Co-partnership societies and partnerships of limited liabilities. Joint stock companies. General ideas concerning stocks and bonds, non-transferable and transferable paper. Joint stock partnerships. Joint stock companies. Premium insurance societies and mutual insurance societies. Co-operative societies. Private co-partnerships. Civil societies having a commercial form. Foreign societies in France.

Agents Employed by Persons Engaged in Commerce.—Agents acting under powers of attorney. Officers and clerks. Commissioners and attorneys. Brokers.

Of Commercial Sales.—General rules for closing a sale and its performance. Different species.

Of Security.—Civil and commercial security. Special rules relating to commercial security. General storehouses; warrants; receipts. Of transportation contracts. General rules. Of railroad transportation. Transportation through the postal system.

Chambers of Commerce.—Operations transacted in them. Stock agents and brokers.

SECOND YEAR (fifty lessons).

OF COMMERCIAL PAPER.—*Of Bills of Exchange.*—History. Theory of the French code. Of the form of a bill of exchange. Of indorsement, of its form and its performance. Of the provision. Of the acceptance. Of the rights and duties of the holder.

Of Checks.—Of their distinctive character. Clearing-house of Paris.

Of Bills Payable to Order.—Domestic bills. The payment of commercial paper by the postal administration in France, Germany, and in Belgium.

Bills Payable to Bearer.

Bank Operations.—Loans. Discount. Opening of credit. Account current. Of the Bank of France. Of colonial banks. Of the landed credit (credit foncier).

Failures, legal settlements and bankruptcies.

MARITIME LAW.—General ideas. Sources of maritime law.

Of Ships.—Ship-owners and owners of privateers. The rights of the different creditors: privilege; mortgages; the right of succession. Abandoning a ship and freight.

Freighting or Chartering.—Of the distinction between extraordinary and ordinary damages.

Of the Bottomry Loan.

Of the Maritime Mortgage.

Maritime Insurance.—General ideas. Particular rules regarding the insurance on a body and the insurance on abilities.

Appendix.—General ideas relating to fire insurance, life insurance, and insurance against accidents.

INDUSTRIAL LAW.—*Patents on Inventions.*—Of the nature of the law granting the profits from the invention to its inventor. The patent on inventions, its character, formalities, publicity. Of the patentability of inventions. Forfeitures. Duration and tax on patents. Of improvements. Of the importation of inventions, patented in a foreign country.

Of the Right of Foreigners.—Provisional protection during public exposition. Of the property in an invention and a patent.

Of the Different Laws of which the Patent may be the Object.—Of the transfer of patents. Of the concession of licenses. Of counterfeiting. Of jurisdiction in case of law suits. Action in nullity. A suit in case of forfeiture. A suit relating to the property of patents. Suit in case of counterfeiting. Procedure, Repression. Of the secrets of manufacture.

Of the Models and Designs of Manufacture.—General ideas on property in works of art.

Trade Marks and Labels.—The character of trade marks. Optional marks and obligatory marks. Property. Transferrence. Depositing. Counterfeits. Repression.

Of a Commercial Name.—Of the names of locality (products sold to foreigners).

Of Dishonest Competition.—The rights of foreigners in matters of industrial property. International conventions (the union of 1883, etc.). Dangerous manufactories, unhealthy or incommodious. Legal systems. System of apparatus and steam-heating.

FOREIGN COMMERCIAL LEGISLATION.—SECOND YEAR (twenty lessons).

The necessity for harmonizing certain matters of commercial law. Partial results accomplished in this respect. Diplomatic conventions. Congresses of commercial law. The sketch of the actual commercial legislation in vogue in the principal countries. The codes and laws to consult. Bibliography. General ideas relating to persons engaged in commerce. Their distinctive marks and obligations in the principal mercantile nations. The organization of commercial tribunals. Of the commercial sale. Of commercial societies. The system of companies by shares. Special study of the English legislation on this subject. The condition of the law and of the fact relating to societies transacting business outside of the countries in which they originated. Of commercial paper, notably according to the German law at the change of 1848, the English law and Scandinavian legislation. Special laws relating to checks, banks of deposit and clearing-houses. Of bankruptcy under the principal foreign laws, specially according to the German law of 1877 and of the English law of 1883. Of the bankruptcies of persons not engaged in commerce. Measures to prevent bankruptcy in Belgium, Italy, Spain, etc. Of transportation by railroad. Legislation relating thereto in the great mercantile countries, and especially in Germany. The projects for diplomatic conventions on this subject. Organization of industrial property in foreign countries. The international similarity respecting this subject. Nationality and transfer of ships. Freight contracts. Freight and consignment. Of marine mortgage. Of damages and their regulation. Marine insurance. Special examination of the rules of York and of Antwerp. Organization of commercial tribunals. Judicial powers of consuls. Their mission in regard to persons engaged in commerce, and especially those engaged in the merchant marine.

POLITICAL ECONOMY.—FIRST YEAR (thirty lessons).

Matters relating to taxes, to customs, to labor questions and to transportation have been respectively comprised in the programs of the legislation relating to customs and the budget, of legislation relating to laborers and transportation.

Preliminary Knowledge.—Cursory review of economic phenomena. The science and art of political economy. The method, importance of observation, of historical criticisms, of experience, of statistics and its most important numerical and graphical processes.

Production.—The three factors in production:

1. Natural agents. The land and the law of diminishing returns.

2. Labor. Division of labor. Freedom of labor. Slavery. Serfdom. Corporations. Regulations.

3. Capital. Its formation, its rôle, its different forms. Machines, their effects.

Classification of Industries.—Large and small industries:

1. Agricultural industry; extensive and intensive cultivation; cultivation on a large and small scale; cultivation of one's own State; renting, Metayers.

2. Extractive industries.
3. Manufacturing industries.
4. Commercial industries.
5. Carrying industries.

Circulation.—Exchange and value. Current value and normal value. Competition and monopoly. The mechanism of exchange. Money. Two conditions which it must fulfill. Qualities which are necessary to good money. The principal moneys: gold, silver, copper coin. The principal facts regarding the history and price of the precious metals. Monetary systems. Legal rate of exchange. Gresham's law. Paper money. Depreciation of silver, its causes, its effects. The American Silver Bill. The Latin Union. Monometallism and bimetallism. Present state of the question in the world. The effects of the depreciation of money on international commerce.

Credit.—Its usefulness. Advantages and guarantees offered by the borrower to the lender. Commercial credit. Fiduciary circulation. The exchanges of public and other paper. The exchange. Banks: function of bankers, discount, deposits, current accounts, checks, clearances. The clearing-house; banks of issue, their relation to the State, their systems in the principal countries. Mortgage credit. Landed credit. Marine mortgage. Credit on security. Loans on deeds, warrants. On articles put in pawn. Agricultural credit. Popular banks. Different systems.

Commerce.—Domestic and foreign commerce. Position of the middleman. Wholesale and retail commerce. Speculation. Monopoly. Law of exportation. Crises. Theory of crises.

Distribution.—Individual property. How it is established. Its economic advantages. Its legitimacy. Transference: gifts, sales, inheritance. Common patrimony.

Freedom of Contract.—Rent. Interest. Basis of interest, its causes and effects. Regulation of interest. Salaries. Basis of salaries. Productivity of labor. Different forms of salaries, bounties, participation in the profits. Profits of the entrepreneur.

Consumption.—Productive and unproductive consumption. Economy and prodigality. Luxury. Absenteeism. Public consumption.

Population.—Malthus and his doctrine. Pauperism: Causes and remedies. Saving. Insurance. Assistance.

The State.—Its position in the economic order of things. Its interference. National and international regulations. Socialism.

LABOR LEGISLATION.—SECOND YEAR (ten lessons).

The Contract in Hiring out One's Services.—Professional syndicates. Societies co-operating for production, for consumption, for construction and for credit. Combinations. Conciliation and arbitration. Privileges relating to salaries. Not distraintable. Methods and times for the payment of salaries. Apprenticeship. Regulation of the work of children, of women and of adults. Accidents in factories, responsibility; professional risks; industrial societies for the prevention of accidents. Laws or legislative questions concerning the institutions for encouraging saving, and providing against future need (institutions for pensioning the aged, insurance and mutual aid societies, etc). Principles of legislation compared.

LEGISLATION RELATING TO THE BUDGET AND CUSTOMS. SECOND YEAR (twenty-five lessons).

Legislation Relating to the Budget.—The budget of the State. Origin and history of public finance. Preparation, voting and execution of the budget. Extraordinary and supplementary credits. Public expenses. Ministerial credits, financial administration and public accounts. Public debt. Amortization. Conversion. Progression of the budget. Resources of the budget. Public revenues. Public domain and the private domain of the State. Railways. Taxes. General ideas of the tax. Its nature. Its characteristic and economic result. Its influence on industry and commerce. The single and the multiple tax.

The proportional and the progressive tax. Tax on capital. Tax on revenue. The direct tax. The indirect tax. Cost of collection. The indirect taxes. Land tax, contribution from persons and personal property, the door and window tax. Licenses. Tax on the revenue derived from personal property. Tax on luxuries. The indirect taxes: Tax of registration and the stamp tax, the customs duties, statistics, etc. Taxes on consumption. Products of the post-office, and the duties on transportation. General organization of the postal and telegraph service. Local taxes. Budgets of the departments and of the communes. The octrois. The reduction of taxes. Financial organization and the fiscal legislation of the principal foreign countries: England, Germany, Austro-Hungary, Italy, Russia, Turkey, United States, etc.

Customs Legislation.—The successive changes in customs legislation which have been made up to the present time. The actual systems. French tariffs. Tariffs of the principal foreign countries. The treaties of commerce in vogue at the present time. The administration of custom houses. Double character of the duties collected by them. Fiscal duties. Protective duties. Theory of duties on the basis of "payment for services rendered." General and conventional tariffs. Respective advantages of these two forms of customs legislation. "The most favored nation" clause. Methods of taxation. Specific duties. Duties ad valorem. Drawbacks. Temporary admissions. Bounties on exportation. Division of the customs duties. Duties on importation. Duties on exportation. Duties on transit. Accessory duties collected by the administration of the custom houses. Its co-operation in recovering certain interior taxes. Police measures and measures taken to prevent fraud. Active administration of custom houses. Extent of land and sea frontiers. Indication of the procedure of the methods for recourse in case of disputes in regard to customs. Rights of pre-emption, etc. Commercial statistics. General commerce. Special commerce. Customs valuations. Official values. Actual values. Influence of price. Raw material. Manufactured products. Special systems. Systems in the colonies. Customs legislation relating to the principal industries. The grain trade. Extractive and manufacturing industries. Sugars. Tax on salt. Marine fisheries, etc. Merchant marine. Differential duties. Surtaxes on the flags. Surtaxes on the warehouse. Bounties on navigation and equipment. Subsidies for construction. Commercial politics and the customs tariffs of the principal countries.

STUDY OF TRANSPORTATION. SECOND YEAR (sixteen lessons).

Establishment, Maintenance and Administration of Routes of Communication.—Of the legal status of ways of communication. Domanial

rights. Establishment of ways of communication by the State, the department or the communes. Franchises. Actual development of roads, canals and navigable routes and seaports. The expenses of establishment and maintenance. History of the systems of French railroads. Financial relation of the companies to the State. Railroads belonging to the State. Railroads of purely local interest. Actual condition of the French systems. Control of the State over the railroads which have been ceded. Legal character of the tariffs, and the conditions on which they are established.

Economic Study of Transportation.—Of the value of transportation and its net cost. Influence of tolls on the development of traffic, and on the utility of the routes of communication. "Baremes" and fixed price. Their advantages and their disadvantages. Price of transportation by railroad or by water. Their variations. Actual importance of the traffic. Net cost of transportation by railroads. Elements of variation in the net cost. Fixed price and "baremes." Representation of the tariffs by curves. Of competition in matters of transportation, especially the competition between railroads and waterways. Tariffs called "Tariffs of penetration."

A Special Study of Railroad Tariffs.—General principles of railroad tariffs. Uses of "Recueil Chaix." "Baremes" and their graphic representation. Application of distance. Clauses relating to intermediate stations, not mentioned, and connected. Passenger rates. Classes, round-trip tickets, excursion tickets, and compartments of luxury. General tariffs of fast and slow freight. Methods of application and conditions of delay. Classification. Exceptional tariff. Accessory expenses. Special tariffs. Methods of applying these tariffs. Portage and cartage. The relation of railroad enterprises to other methods of transportation.

COMMERCIAL INSTRUMENTS. SECOND YEAR (twenty lessons).

The Elements of Mechanics.—Velocity and acceleration. Force. Quantity. Work and living force. Mechanical units. The mechanical equivalent of heat. Energy: its transformations and conservations. Sources of energy. Study of the principal motors. Animal motors. Motors propelled by wind. Hydraulic wheels. Turbines. Detailed study of the steam engine and its latest improvements: steam generators; administrative regulation and surveillance. Gas and petroleum motors. Various motors. Instruments of transmission and transformation of motion. Dynamometers and various indicators.

Telegraphy.—The principle of the electro-magnetic telegraph. Overhead and subterranean lines. Detailed study of the Morse system. Discussion of a postal telegraph, lightning-rods, compass, clocks. Dial apparatus. Comparison of the two systems. The apparatus for increasing the rapidity. Monopoly and irresponsibility of the State on the subject of telegraphs. Constitution of the French system; bureaus called "Municipal;" semaphores; pneumatic system of Paris. Rates. International communications; land and submarine lines. International union telegraph. Cipher telegrams: cryptography. Lines run in the interest of private persons.

The Telephone.—Description and use of Bell's telephone. Microphone: description and use of a micro-telephonic system. Discussion of

postal telephones. Effects of induction between the telegraph wires and the neighboring telephone wires: methods of preventing it. Comparison of the respective advantages and disadvantages of the telegraph and telephone. State monopoly: its limitations. Organization of the interior telephone communications of a close property between the different parts of an industrial or commercial establishment. Telephone lines used for private interest. Urban systems and groups of Urban systems. Telephonic communications at long distances.

Electric Lighting.—The ideas relating to Ohm's law and the electric unities: ohm, volt, ampere. Voltmeters and amperemeters. Brief theory of Graham's machine. Magnetic and dynamo-electric machines, with continued current and alternating currents. Accumulators. Electric arc lamps. Regulators. Jablochkoff's candle. Incandescent electric lamps. Choice to make between the arc lamps and the incandescent lamps according to circumstances.

Distribution of Electric Light by direct current or by transformed currents. Lighting of passenger stations, of market halls, and of large industrial, commercial or financial establishments. Domestic lighting; study of a certain number of cases of actual lighting. Various advantages resulting from the employment of the electric light. Price of electric lighting compared with that of gas. Future of electric lighting, its war with gas.

Transportation by Electric Force.—The most satisfactory systems. Trials and applications. Electric traction. Administrative regulations and surveillance of electric lines and factories.

Lifting Apparatus.—The different types of hand cranes. Timber and metallic cranes, fixed or variable. Steam cranes with or without gearing. Christian cranes. Revolving steam cranes. The organization of transporting in the factory park of Creusot. Cranes run by water under pressure; the Armstrong system. Revolving steam derricks employed in unloading railroad cars or river boats. Inclined planes with trucks.

Railroads.—Comparison between the traction of a vehicle on an ordinary road and on an iron track: necessity for modifying the grades and curves. The numerous conditions which must be fulfilled in order to lay out a great railroad line. A normal track and a double track. Ties; iron rails and steel rails, etc. Transferring from one track to another: switches, crossings, etc. Railroad ties. Turning tables. Rolling stock for transporting merchandise. The construction of a train of cars. Couplings. Different types of cars. Box cars, truck cars and platform cars. The limitation of charges. Transportation of large pieces of wood. Special cars. Freight stations. Small stations. Principal stations. Quays and market halls. Stations for transshipment of goods. Special cranes employed in these stations. Large stations at junctions. Sorting cars in order to return them. Sorting and classifying according to weight (the inclined plane of Edge Hill). Terminal stations: their location (station at Batignolles, of Bercy, etc.). Detailed description of the station "la Chapelle." Switching cars. Moving by hand and with horses. Switch engines. Hydraulic windlasses. Charcoal stations. Stations for iron and stone. Particular branches. Conditions of establishment and exploitation. Administrative formalities. Narrow gauge railroad. Facilities and economy of building the road and of material. Example. Stations at the junctions with the principal systems. Their

machines for transferring merchandise. Small railroads for the special use of manufactories, of large commercial houses and warehouses in general. Tramways. Portable railroads.

Inland Navigation.—Material for transportation on rivers and canals. Forms and dimensions of boats. Different methods of locomotion: towing by hand, with horses, and attempts at towing by steam. Navigation with sails and drifting. Steam navigation. Wheel steamers. Screw steamers. Towers. Rafting loose logs, and logs fastened together. The canalization of rivers; dams; locks; lateral canals. Summit level ponds. Method of feeding. Inclined plane of the Morris canal; inclined plane of Black Hill. Great Western elevator; Anderton's elevator; elevator of Fontinettes. Landing places for inland navigation.

Seaports.—War between the marine cities; the progress realized every day in the management and in the use of machinery at seaports. The different operations involved in handling merchandise from the time it leaves the hold of the vessel until it is placed in cars or in storehouses, and vice versa. The harmony necessary to establish between land and naval institutions. Ocean seaports. The tide port. Wet docks. Docks for half tide. Docks for full tide. Deep-water docks. Seaports without docks. Works on the sea coast, jetties, outer dikes. Description of a typical port according to M. Barret. Jetties affected by steamers transporting dispatches, passengers and prize merchandise. Sheds and storehouses. Iron tracks. Jetties affected exclusively by steamers carrying merchandise. Jetties for exportation or importation of heavy and cumbersome merchandise. Wooden bottoms. Pilots: New York. Quays and the shores of docks: their management. Maritime stations. Quays and exterior embankments. Transferring from one vessel to another. The apparatus used for lifting at wharves: movable hydraulic cranes. Floating steam cranes. Derricks worked by hand, by steam and by hydraulic pressure. The utilization of hydraulic pressure for manipulating, turning bridges, windlasses, etc. Unloading of grain. Pneumatic apparatus. Floating elevators. Establishments for repairing: docks for careening, dockyards, windlasses, floating docks. Docks of transfer. Dry docks. The docks of London and of Liverpool. Docks for the exportation of coal: Northumberland and Tyne dock. Detailed description of the seaports at Trieste, Marseilles, Havre and Antwerp.

Warehouses and General Storehouses.—Buildings having several stories and buildings of but one story; advantages and disadvantages of each kind. Construction and management. Elevator apparatus; charges for hydraulic elevating or lowering goods. Buildings destined to receive special merchandise. Spirits, wines, vegetable oils, petroleum, storing grain. Pits and various granaries.

PENMANSHIP. (Two Years).

FIRST YEAR (twenty lessons). SECOND YEAR (fifteen lessons).

Review of the general principles relating to the different species of handwriting. Theoretical and practical exercises. The customary practice in writing and in the graphic execution of correspondence and of commercial accounts; business letters, commercial bills, invoices. Transferring entries from the journal to the ledger; inventories; balance sheets; discount memoranda, etc. Administrative documents, synoptical tables, memoranda, etc. Foreign commercial correspondence.

NOTES ON THE COMMERCIAL SCHOOLS OF FRANCE.

GROUPS.—The French schools of commerce may be divided into two groups. The first group comprises seven higher schools, of which two are at Paris and five in the provinces. The second group comprises four primary and intermediate schools, of which three are at Paris and one in the provinces; a total of eleven schools of commerce.

CONSTITUTION OF THE SCHOOLS.—The Superior School of Commerce at Paris; the Commercial School of the Avenue Trudaine, and the School of Higher Commercial Studies are all governed by the Paris Chamber of Commerce, which purchased the first in 1869, and founded the other two in 1862 and 1881.

The schools at Lyons, Marseilles, Havre and the Commercial Institute of Paris, are controlled by private corporations. The school at Rouen was also created by a corporation; its capital having been exhausted in 1882 an arrangement was made which incorporated the school into the School of Sciences and Letters of Rouen (Academy of Caen), in whose hands it now languishes. The method of subsidies was adopted in the case of the School of Bordeaux, which was organized in 1874. This combination permitted a reduction of the cost of tuition to 200 francs, while giving to the school a good location and an excellent equipment. The School of Reims, supported by the same method of subsidy as the School of Bordeaux, became a public establishment in 1882 under the immediate control of the Ministry of Public Instruction, like the Manual School. The Practical School of Commerce and Accounting has remained private property.

If one compares the value of these different methods of support, one must recognize that they are all equally precarious. The School of Rouen has foundered for lack of capital; the school at Havre manages to exist with great difficulty; that at Lyons, founded by a private corporation which seemed to offer more permanence, has about arrived at the end of its resources. If the Paris Chamber of Commerce had been obliged to carry for the School of the Avenue Trudaine and that of the rue Amelot the same deficits as for the School of Higher Commercial Studies, it is evident it would have been obliged to have closed these establishments. As to the School of Bordeaux, it could not survive a disagreement between the three bodies which subsidized it. The school at Reims alone sees its position assured by the aid of the State, but it has lost all liberty. So far as an educational point of view is concerned, those schools governed by private corporations offer more freedom in instruction. Nevertheless, it does not assure as careful supervision as the method of subsidies, for shareholders are usually little interested in operations which do not give profits. Finally, excellent results have been obtained under all methods, so far as the instruction is concerned, but from the administrative and financial point of view the direct control by the State would be preferable to the corporation, which is less watchful and less attentive, and the form of corporate management is, moreover, rarely favorable to enterprise.

COUNCILS.—The different schools are administered by councils, composed ordinarily of the prominent merchants of the vicinity. The councils of the three schools, supported by the Paris Chamber of Commerce, are recruited from the members of that body. Besides looking after the financial administration these committees are also charged with

supervising the course of study. The council of the school at Lyons is composed of thirteen members, of whom four are chosen from the Chamber of Commerce, and nine from the shareholders. The council of the school at Marseilles is composed of twelve members, of whom ten are shareholders and two are members of the Chamber of Commerce, and is assisted by an educational committee founded by it, and whose members can be taken from outside the body of shareholders; a provision very wise and favorable to good instruction, for it permits the introduction of specialists into the council. The school at Havre is administered by a council of twelve members composed of shareholders elected in general assembly. Besides looking after the financial administration, it organizes the instruction of the school and supervises it. At Bordeaux the administration of the school is confided to the Philomathic Society, under the control of a committee of supervision, composed of five members of the Municipal Council, five members of the Chamber of Commerce, and a representative of the council general of the Gironde, also five members of the Philomathic Society. The Commercial Institute of the Chaussée d'Antin is administered by a council of supervision, taken from the founders and shareholders of the institute. Finally, the Professional School at Reims has a committee of patronage and supervision, composed of fourteen members. The Superior School of Commerce at Paris, besides its administrative delegation, has an educational council composed of twenty-five notabilities and presided over by the Ministry of Commerce.

SCHOLARSHIPS.—In addition to the information which is found in the table published above, we add some remarks upon the pecuniary aid which the State has given to commercial instruction. A ministerial order, dated February 1, 1849,* created at the Superior School of Commerce at Paris, directed at that time by M. Blanqui, sixteen half scholarships of 500 francs each. By an order of the twenty-third of April, 1853, these sixteen half scholarships were transformed into twelve entire scholarships of 1200 francs each. The total expense of 14,400 francs was taken from the grant for the encouragement of industry and commerce.

A special grant for the maintenance of scholarships in the schools of commerce was first inserted into the budget for the year 1875. This grant amounted to 30,000 francs; it was raised to 40,000 francs by the law of 1883. These scholarships are distributed as follows:

Date of Creation.	Name of School.	Scholarships.	Value.
April 23, 1853	Superior School of Commerce of Paris	12 à 1200 =	14,400
Oct. 14, 1874	Commercial School of Paris	10 à 240 =	2,400
Law of Finances of 1883	School of Higher Commercial Studies	10 à 1000 =	10,000
Feb. 22, 1875 Jan. 5, 1882 Dec. 15, 1884	Superior School of Commerce of Marseilles	8 à 600 =	4,800
Feb. 22, 1875	Superior School of Commerce of Lyons	4 à 600 =	2,400
Oct. 14, 1874	Superior School of Commerce of Rouen	10 à 300 =	3,000
Feb. 22, 1875	Superior School of Commerce of Havre	3 à 600 =	1,800
Feb. 22, 1875	Superior School of Commerce of Bordeaux	5 à 200 =	1,000
		Total,	39,800

SUBSIDIES.—The subsidies given to the establishments of commercial instruction were made from the grant for the encouragement of technical instruction, which figured regularly in the budgets since the year 1868.

* Some half scholarships had been established ten years earlier.

A special grant of 24,350 francs for subsidies to the establishments of commercial instruction was inscribed for the first time in the budget for the year 1884. For the year 1886 this grant was raised to 42,000 francs. These grants were distributed as follows for the year 1884–85 :

		1884.	1885.
Superior School of Commerce of Lyons	Fr.	5,000	5,000
Superior School of Commerce of Rouen		2,000	2,000
Superior School of Commerce of Havre		5,000	5,000
Commercial School of Paris		200	200
Commercial Institute of Paris		1,500	1,000
Superior School of Commerce of Paris		50	50
Philomathic Society of Bordeaux		2,000	2,000
Industrial Society of Saint-Quentin and of l'Aisne		3,000	3,000
Society for the Technical Instruction of Women		500	500
Society of the Rouen for the Technical Instruction of Women		1,000	1,000
Superior Higher Course of Commercial Accounting for Women		1,000	1,000
Society for the Technical Instruction of Women (foundation E. Lemonnier)		1,000	1,000
Course of Accounting of the Paris Chamber of Commerce		1,100	1,100
The Academic Society of Accounting and other societies		1,000	1,000

TRAVELING SCHOLARSHIPS.—The budget for the year 1885, under the head of the Ministry of Commerce, contained a special grant of 9,000 francs for the establishment of traveling scholarships, in favor of the graduates of the higher schools of commerce. This grant was raised to 18,000 francs by the budget of 1886 ; the grant asked for at that time was 50,000 francs. The creation of traveling scholarships answers the necessity of extending our field of commercial activity abroad, as well as a just requirement from the standpoint of instruction. One must not forget the fact that in other careers—in the fine arts, in university studies —traveling scholarships have been established at great expense, and that schools have been organized in order to enable the graduates to ripen their talent by the study of the works of the great masters.

In Belgium the government created, in 1862, several traveling scholarships for the licentiates in commercial sciences graduating from the Superior School of Commerce in Antwerp. Public opinion in France has been favorably inclined to the idea of taking a similar step in favor of the graduates of our schools of commerce. M. Jacquemart, in an excellent report, has made himself the eloquent interpreter of this sentiment, and he has been fortunate enough to gain his cause. Everything points to the fact that future budgets will increase each year the grant for these scholarships. The grant in Belgium amounts to 45,000 francs.

> "When the French State shall decide to follow the example of Belgium, we said some time ago, it must not hesitate to increase the number of scholarships. One means of creating a large number of them without increasing the cost to the contributors would be to transform them into temporary loans made by the treasury, and reimbursable under given conditions."

We have on several occasions mentioned this system, which could also be adopted by commercial societies or syndicates or insurance companies. This system of loans would substitute for a beneficiary a debtor, who has taken upon himself certain formal obligations.

> "The beginning of a commercial career, let us add, ought not to be a gift from a society ; a capital received and which is not to be repaid ; a debt which is not to be liquidated. The State should

limit itself to making a loan, and the traveler who benefits by the advance should repay it when he shall have succeeded in making it bear fruit. This capital would then assist other travelers, who would employ it fruitfully in their turn."

However it may be with these reflections, we congratulate M. Jacquemart on this happy initiative and the result accomplished. The necessary thing was to do something. Below is appended the set of regulations relating to traveling scholarships, founded by the Ministry of Commerce:

First Article.—A certain number of traveling scholarships will be annually opened to competition by the Ministry of Commerce. These scholarships, of an annual value of 3000 francs, are granted for three years.

Second Article.—To be admitted to the competition, candidates must produce a certificate of good conduct and moral character, and evidence showing: first, that they are French citizens either native or naturalized; second, that they are at least twenty years of age and not more than twenty-five at the time of the competition; third, that they are furnished with a diploma of one of the schools of commerce designated below:

School of Higher Commercial Studies;
Superior School of Commerce at Paris;
Superior School of Commerce at Lyons;
Superior School of Commerce at Marseilles;
Superior School of Commerce at Bordeaux;
Superior School of Commerce at Rouen;
Superior School of Commerce at Havre;
Commercial Institute of Paris;
Commercial School of the Avenue Trudaine at Paris.

Third Article.—Other things being equal, the proof that the candidate has already passed one or more years in active business is also considered.

Fourth Article.—The competition, announced a month in advance in the official journal, occurs at Paris from the first to the thirtieth of December.

Fifth Article.—Registrations are received at the Ministry of Commerce up to the fifteenth of November.

Sixth Article.—The competitive examination is divided into two parts. First, a written examination; second, an oral examination. The written examination comprises: first, commercial geography of the entire world; second, the history of French commerce; third, a composition in a foreign language, English, German, Spanish, Italian or Portuguese. The oral examination includes: first, the commercial geography of the entire world; second, French customs legislation; third, French commercial law; fourth, a foreign language, English, German, Spanish, Italian or Portuguese, at the choice of the candidate.

Seventh Article.—These different examinations are conducted before a jury named each year by the Ministry of Commerce.

Eighth Article.—The candidates judged worthy of the traveling scholarships will be asked to choose their place of residence after consultation with the Minister of Commerce, who will strive to render their sojourn abroad easy and pleasant, by recommending them to large French business houses and procuring for them as much as possible the assistance of diplomatic and consular agents.

Ninth Article.—The holders of these scholarships must address, each quarter, to the Ministry of Commerce a study upon the commerce and industries of the region in which they are living. They must add a certificate from the French consul in the district where they are residing, certifying that they are occupying themselves with serious studies, with business and with commercial journeys.

These regulations suggest some reflections on the diploma which one requires of the candidate, certifying that he possesses the knowledge shown in the programs of the schools. We believe then that the examination is superfluous. It will certainly be judged to be so later when the State shall control the schools directly. But as long as the examination is recognized to be necessary, why have they eliminated from the test everything which relates to the science of commerce itself, which forms with modern languages the basis of the instruction in the schools of commerce. Law and legislation are only auxiliary branches in this instruction.

Is not the essential rather the commercial knowledge of the sort demanded, attested either by the possession of a diploma or by an examination covering the program of the higher schools themselves, and satisfactory statements in regard to the state of the health, character, habits of study, intellectual keenness, industry, spirit of initiative, fine sense of honor, etc., etc., all things which escape the test of the examination? This information could be furnished by the Chambers of Commerce, and especially by the man who had employed the candidate.

The regulations say further that, other things being equal, the fact that the candidate has already passed one or more years in active business will be taken into serious consideration. This provision authorizes, by implication at least, the candidate to present himself without having had any business experience—a thing which seems to us undesirable. We should have preferred that, other things being equal, practical experience should receive absolute preference, and as a matter of principle, considering the actual state of commercial instruction, this practical experience ought to be insisted upon in all cases, with the minimum period of one full year. At any rate, and let us emphasize this fact, if the foundation of these traveling scholarships is to give the best results, regard must be had to the state of health, activity, initiative and moral character of the candidate, and more attention must be paid to commercial knowledge than to legal knowledge.

The holders of traveling scholarships must address, every quarter, a report to the minister upon the commerce and industries of the countries which they are visiting. This provision is excellent. We believe, however, that one ought to profit by the experience obtained in Belgium, where the report of a scholarship holder, demanded at one time a few months after the trip, is now demanded only after a full year, so that the pupil can make a careful study of the commerce of the country where he is living. "Since this provision was adopted," M. Grandgaignage, Director of the Institue, writes us, "I notice that the reports are more thorough, and merit publication in the consular reports."

Scholarships—Appeal to the Merchants.—If the State is thus so far from having encouraged commercial instruction, what shall we say of our commerce itself? With rare exceptions no person in France has understood the importance of this instruction, which must be considered

as truly national as that in agriculture and industry. We have shown elsewhere in this treatise that only a few Chambers of Commerce—those of Paris, Lyons, Marseilles and Bordeaux—have really made sacrifices for the sake of this instruction. What have the other Chambers of Commerce to the number of 103 done? Absolutely nothing. Those who have not created schools of commerce have not even founded scholarships in the establishments in which they ought to have interested themselves, because they are representatives of commerce. Is it not incredible? And what have the syndical chambers of merchants and manufacturers done? These number 167 in Paris alone, and they count members perhaps by the thousands. Alas! They have not even founded a scholarship, nor encouraged in any way the graduates of these schools. Syndical chambers in the provinces to the number of 343 have shown the same indifference; they have given absolutely no aid to commercial instruction, as absolutely nothing as to the study of theology. How about our municipal councils, especially those of the large cities? The same indifference, except at Paris, Lyons, Havre and Bordeaux. And the departments, the councils general. The same disregard, except the department of the Lower Seine, and that of the Bouches-du-Rhone. And what of the learned societies, and especially the societies of political economy? Again nothing; absolutely nothing, except the Philomathic Society of Bordeaux, and the Society for the Protection of Commerce in Marseilles. Our economists, it would seem, ought to interest themselves in something else than the mere development of economic science. A certain number of merchants, bankers and corporations, whose names we have mentioned above, are the only individuals or bodies who have understood the advantage of assisting the instruction which aids our commerce directly.

Let us then take up this good movement and aid it as much as possible. Who should assist the work of commercial instruction if not commercial corporations themselves? One must not leave the whole burden of this work upon a few; one must not expect everything from the State, which justly asks that you should give the example to it which it needs in order to know what one should expect of it.

If we should secure one scholarship from each Chamber of Commerce, from the Municipal Council of the leading city of each district, from the council general, and from the syndical chambers, we should have a total of 1062 scholarships. This would not injure any person and our commercial instruction would be immensely advanced. It would then take on an extension worthy of such a nation as ours.

Duration of the Studies.—In the actual state of our schools the three-years' course is not too long. The School of Lyons has just extended its course to four years, of which two years are preparatory, although lowering, it is true, at the same time the age of admission to fifteen years. The two-year curriculum adopted by the school at Mühlhausen, at Rouen, Havre and Bordeaux is too difficult for the majority of the pupils. Foreign pupils, moreover, have too imperfect a knowledge of our language to enable them to follow the course with advantage from the beginning.

Commercial instruction, very complex in its nature, must strive to develop the judgment of the pupil at the same time that it furthers his special knowledge and his professional skill. It is for this reason that it must pay some regard to the age of the pupils and to the length of the curriculum. The age of the pupils and the time devoted to the work play

a great rôle in all educational matters. We believe, therefore, that the schools at Rouen, Bordeaux and Havre will soon be ready to imitate the schools of higher studies and add a preparatory division.

AGE OF ADMISSION.—At about the age of fourteen the pupils in the special secondary instruction finish the studies of the intermediate grade, in consequence of which they could enter the schools of commerce, where they would find an instruction certainly more profitable for them than that of the superior grades of the special secondary instruction. In order to recruit their preparatory classes the schools of commerce would find it to their advantage to lower the age of admission to fourteen. In exceptional cases the pupils properly prepared at fifteen might then enter the higher school. Those who could not pass the examinations with success could spend another year in the preparatory class, which would be divided into two sections, as at Lyons and the Superior School of Commerce at Paris.

BACHELORS.—Those holding a bachelor's degree are exempt from the examination; they may enter directly the first year of the higher school at Lyons; Bachelors of Science and of special secondary instruction enter the second year directly, and at Marseilles, likewise provided, they can pass an examination on the subject-matter of the first year.

NUMBER OF PUPILS.—The number of pupils at the schools of commerce has not increased in the proportion which one would have hoped from the movement of public opinion which manifested itself in favor of commercial instruction immediately following the year 1870. In 1871 the school was established at Rouen; the following year three other schools were opened at Lyons, Marseilles and Havre. To found these four establishments they succeeded in obtaining a capital of more than two million francs by playing, it is true, upon the patriotic feeling then so much excited against the foreign element, and which desired to remove it forever from our offices. But no new school was established in 1873. A new one was created in Bordeaux in 1874, and with this the development stopped. The enthusiasm for the movement disappeared as the sentiment from which it grew died out. Little by little we returned to our traditional indifference. Observation showed that it was much easier to obtain subscribers than to create a really permanent movement in favor of commercial instruction. The habits of a nation can not be changed in a day. If money is the sinew of instruction it is necessary that the schools should grow in numbers in order to assure the success of this branch of education. The commercial interests of our leading cities had subscribed the capital for these schools with very good grace, but everything shows that they intended for the present to preserve their children for university instruction, counting upon, we know not whom, to fill the new schools which they opened. But when we count upon our neighbors we are apt to suffer cruel losses.

Statistics show that each year about four hundred and fifty thousand young people enter upon commercial or industrial pursuits. To hope that one-tenth at least of this number would attend the schools of commerce of various grades was not expecting too much. But statistics show that we only reached about one-thousandth in the grades of superior instruction, and about three and thirty-seven thousandths counting the pupils of primary and superior primary instruction. The public was not slow in grasping the situation. Even at Bordeaux, in 1874, it was no

longer possible to find subscribers to establish a school under the corporate form by the sale of shares. The truth is, that in all things time is necessary to prepare the public mind for action, and that in 1870 we were only superficially, and, so to speak, artificially, in favor of commercial instruction and schools of commerce. If the lesson of our military experience had demonstrated and borne in upon the public mind the insufficiency of our general education, the lessons of our economic experience were not yet sufficiently impressed in order to show us the insufficiency of our commercial instruction. The recovery of business came, moreover, very soon; thus quieting our spirits, ending, it is true, by misleading public opinion on the subject entirely. One doubted no longer of the commercial prosperity of the country. Why should we instruct our youth in commerce when commerce was going on so well without it? This recovery of business coming so quickly, we repeated the financial follies of the empire, which was then like a vertigo which took possession of the nation, corrupted with the ambition of becoming rich rapidly without labor.

To-day things have changed. We are paying for these follies. The lesson has been terrible; we now have time to reflect. And as we see on every side the economic progress of neighboring nations, we shall recognize that our commercial education lags far in the rear. Everything then points to the approaching success of the schools of commerce.

* * * * * *

Of 1488 pupils in the school at Lyons, there were 137 in the silk division of the school; the school at Bordeaux had 230 pupils in its industrial division, leaving, therefore, a total of 7053 pupils for higher commercial studies since 1871, and 9238 in primary and higher primary instruction.

The examination of the preceding table shows a continued increase in the number of pupils in the superior schools during the years from 1872 to 1877. The growth has been sensibly slower from 1880 to the present. However, thanks to the creation of the School of Higher Commercial Studies, the annual number exceeded 600, beginning with 1883. In 1886 it was 618, falling, however, to 490 if one deducts the 128 pupils in the School of Higher Commercial Studies, which would show a diminution of about 100 pupils as compared with the years 1877 and 1878. This diminution is certainly due to the law relating to military exemption, which did not include in the class exempt from the examination the the graduates of the schools of commerce. We should no longer cast upon these schools a discrimination so marked, as it is undeserved. For the military examination does not correspond in severity even to the final examination of the first year in the higher schools of commerce. If one had wished to injure, to hamper, the growth of these excellent schools, one could not have chosen a more efficient means. One can scarcely attribute so unjust a discrimination to anything else than ill-will.*

In that which concerns the primary and intermediate schools, figures show a constant growth in attendance. In 1884 the number of students in the School of the Avenue Trudaine decreased about fifty in

* This discrimination has since been removed, and in the last two years, 1892 and 1893, attendance has rapidly increased at these schools.

consequence of the competition of the Commercial Institute, which was so nearly like it, but the following year this loss disappeared, and commercial instruction, in consequence of the creation of the institute, saw the total number of the pupils increased. The Commercial School of the Avenue Trudaine has had 8780 pupils since its creation in 1863.

FOREIGN PUPILS.—At the Superior School of Commerce in Paris, an establishment whose reputation is widely extended, the foreign pupils sometimes form one-third of the total number. The School of Higher Commercial Studies had ten foreigners in the year 1886, a total of fifty-one since its establishment in 1883. At the school at Lyons there is an average of ten foreign pupils, there being nine for the scholastic year 1885–86. At the school at Marseilles the yearly average of foreign pupils is from twenty-five to thirty, except during the last year or two when the fear of cholera has reduced the number by half. At the school of Bordeaux there have been forty-three foreign pupils since 1874, and forty-four at Havre since 1880, eleven of whom belonged to the year 1885–86.

BACCALAUREATE PUPILS.—It is a matter of interest to note the proportion in which baccalaureate students, that is graduates of the lycées, are to be found in these schools of commerce. On an average the Higher School of Commerce at Paris has from eight to ten; the School of Higher Commercial Studies has this year fifty-one;* it has enrolled 186 since 1883. There are fifteen this year at Lyons; from six to eight each year at Marseilles; thirty-five at Bordeaux since 1874, and about ten at Havre since 1880.

RESIDENT PUPILS, HALF-BOARDERS AND DAY PUPILS.—The Higher school of Commerce at Paris has received half-boarders only since 1873. Of 1650 enrollments from 1873 to the present, 1152 were resident pupils and 498 half-residents, being an average of twenty-three. The School of Higher Commercial Studies has this year fifty-two resident and seventy-four half-boarders; the school at Lyons eighteen residents and eighty-five day pupils; that at Marseilles fifteen resident and ninety-seven day pupils.

REWARDS.—At the end of each year the pupils who have passed the examination in a satisfactory manner receive either diplomas or certificates. Gold, silver and bronze medals are awarded in the schools of Paris and Marseilles. At Lyons at the end of the second preparatory year the pupils receive a certificate. The diplomas of the Superior School of Commerce and those of the Higher Commercial School of Studies are signed by the Minister of Commerce.

TRAVELING SCHOLARSHIPS.—Certain schools grant prizes in the form of traveling scholarships to the best pupils, imposing upon them the condition of presenting to the director of the school a commercial report upon the countries which they have visited. At the Superior School of Commerce at Paris, where this prize was established by the Chamber of Commerce, a special topic is assigned to the pupil who must make an extended study upon it. At the school of Lyons the graduate has free choice of his subject, as also at Bordeaux. At Havre the traveling scholarships have been abolished.

* "This year," in the discussion of French schools, means 1885-86.

DIPLOMAS.—At Paris, Lyons, Marseilles, Bordeaux and Havre the graduates have, up to the present, remained faithful to their chosen career and without, one may say a single exception. We believe that this record is unequaled by the pupils of any other branch of instruction and we deduce from this the most favorable conclusions both as to the schools themselves and as to the career, which never fails those who devote themselves to it provided they have been properly trained, and are resolved to follow the line of good conduct and of persevering labor to which they owe their diplomas. What finer eulogy could be pronounced on any branch of instruction than to say that none of its graduates have gone to swell the ranks of the discontented. There is another thing which we must not forget in regard to this commercial instruction, and that is that it has led about eighteen per cent of its pupils to try their fortunes abroad. At Bordeaux of 93 graduates, 16 are in foreign countries or in the colonies. At Lyons 86 out of 400; at Marseilles 37 out of 230; at Havre 18 out of 125; at Paris 30 out of 233, being a total of 187 educated young men who are devoting themselves to the development of our foreign commerce. This is a most favorable result, and speaks well for these schools of commerce, without the benefit of whose training these young men would have probably remained in France.

As to the graduates who have remained at home, they have usually remunerative posts, formerly open to foreigners alone. These schools have furnished French merchants a body of employes, specially trained, whom a few years of practice make into exceptionally valuable assistants.

Unhappily the number of pupils who pursue their studies up to the obtaining of a diploma is scarcely fifteen per cent, being 1132 out of 7369 for the period from 1872 to 1886. Without doubt this number would have been considerably larger if the diploma had been accepted as a ground of exemption from the one-year military service examination.

PROFESSORS.—The number of professors varies from nine at the school of Havre to thirty-two in the superior schools of Paris. The salaries are varied in proportion to the importance of the course and the number of hours which the professors give to the respective courses. As to the importance of the courses they are subject to various estimates, according as the instruction in the various schools tends in one direction or another. From the point of view of the specialty, it would seem that the professors of accounting, of merchandise and of commercial geography should be found among the best paid instructors. But at the School of Higher Commercial Studies, for example, where one gives, it is true, not so much time to commercial instruction, a professor of accounting receives only one-sixth of the remuneration per hour as a professor of law. There are, moreover, many things to be said upon this complex question of instructors, which is closely connected with the definitive organization of schools of commerce. We return to this subject farther on.

Of the six superior schools of commerce only three—that of Paris in the rue Amelot, that of Marseilles and that of Havre—have directors who also teach. This point will also be discussed later.

A Comparative Table of the Expenses of the Various Schools of Commerce.

	Superior School. Budget.	Higher Studies. Budget.	Lyons.	Marseilles.	Havre.	Bordeaux.
Salaries	87,000	117,110	63,167.55	44,979.70	18,866.75	61,400
Food	70,000	63,593	20,321.10	. .	. .	. .
Rent, Taxes and Insurance	32,000	8,453	8,274.15	10,454.12	6,276.40	. .
Heating and Lighting	8,500	14,160	2,197.10	1,917.52	. .	2,300
Laundry	6,000	5,079.45	1,525.30	. .	. .	. .
Maintenance and Repairs	8,000	5,900	2,073.95	361.75	. .	2,400
Advertising	3,000	5,000	942.50	1,200.30	1,091.20	1,400
Sinking Fund	12,400	. .	. .	. .	. .	. .
Library	. .	1,200	. .	331.35	. .	500
Laboratory	. .	1,600	. .	. .	. .	. .
Miscellaneous Expenses	3,100	4,700	703.75	1,933.05	395.90	2,000
Water	. .	1,985	990.45	. .	. .	. .
Materials for Manufacture	. .	. .	2,965.65	. .	. .	. .
Total of Expenses	230,000	228,780.45	103,161.50	61,177.79	26,630.25	70,000
Total of Receipts	230,000	228.780.45	78,492.90	63,979.14	24,013.80	70,000
Balances			24,668.60	2,801.35	2,616.45	

The budget for 1886 in the first two columns can be modified in the course of the scholastic year. They are made upon estimates, based, it is true, upon the experience of preceding years, notably for the Superior School of Commerce, whose receipts and expenses can be estimated almost exactly. It will be noticed that this school pays rent, and practically contributes to the sinking fund. In the budget of the second school the rent represented by the annuity due the Credit Foncier does not figure. The school of Lyons shows a loss, as also that of Havre. The school of Marseilles shows a surplus. That of Bordeaux is assisted by various subsidies. One will find the expenses of the Commercial School given in another chapter. These expenses amount to 120,000 francs, of which 76,000 francs are for salaries. We have no information on this point as to the Commercial Institute. The Professional School at Reims expends 61,000 francs for salaries, of which 47,000 are paid by the State, the rest by the city of Reims, which also pays for the expenses of the school buildings. The Superior School of Commerce more than balances its expenses and its receipts, and is thus enabled to contribute largely to the sinking fund. The Commercial School of the Avenue Trudaine is also in a prosperous condition. The school of Marseilles, in the provinces, after having had a deficit for many years on an average of 11,472 francs from 1872 to 1881, has seen its receipts exceed its expenses in 1882, 1884 and 1885. The schools at Lyons and Havre and the School of Higher Commercial Studies at Paris regularly show a deficit; that at Bordeaux also; but these losses are provided for in the latter case by the various subsidies. As to the Commercial Institute in the Chaussée d'Antin, it is still in the first period of its establishment, that of sacrifices; but everything leads us to hope for excellent results in the near future. Finally, the school at Rouen is suffering; the school at Reims has just begun to grow; and the Practical School of Commerce and Accounting is a profitable private venture.

A comparison of the programs of the higher schools.

The programs of the superior schools of commerce possess a uniformly common basis of instruction. This is made up of accounting, arithmetic,

penmanship, geography and commercial history, the study of merchandise, French and foreign languages, law and legislation relating to commerce, political economy, and the elements of the physical and natural sciences. To these general and special subjects of instruction almost all the schools have added visits to local industrial establishments, and some of them, notably the Superior Schools of Commerce at Paris and Havre, take long trips of inspection throughout France and in foreign countries. Finally, to answer special wants or local exigencies, certain schools have added other branches of instruction. Such, for example, is the course of elocution at the schools at Marseilles and Havre; the course of equipment at Marseilles, Havre and Bordeaux; the course in the physical, chemical and mechanical sciences, and the course in drawing at the Superior School of Commerce at Paris; and numerous courses in law at the School of Higher Studies.

SPIRIT OF OUR COMMERCIAL INSTRUCTION.—The instruction, more comprehensive at the Superior School of Commerce at Paris and at the School of Higher Commercial Studies, is more limited to a narrow specialty in the schools of Lyons, Marseilles, Havre and Bordeaux, where one devotes more time to the practical exercises in the commercial offices and less time to theoretical science.

These two tendencies in fact have shown themselves in the spirit of our commercial instruction from the foundation of the school at Mühlhausen, whose program taken from that at Antwerp made a departure from that of the Superior School of Commerce at Paris. It is of value to define more exactly the motives which have underlain these two contrary tendencies. Those who favor confining the instruction to the narrow specialty argue as follows:

"When a school has a well-defined end, all its instruction ought to tend toward this end. Whatever departs from this is taken from the time necessary to the fundamental studies. Without doubt it would be very agreeable to know everything, but as one cannot study everything, one must resolve to limit one's self. In overloading the program the only result can be that the pupils have studied a little of everything and do not know anything thoroughly."

The programs of the school at Mühlhausen and those of the schools at Lyons, Marseilles, Rouen, Havre and Bordeaux have been constructed in accordance with this idea. The opposite line of reasoning is as follows:

"Some have wished the commercial schools to be almost exact representations of business offices. For this purpose one has imitated a business house, and the pupils correspond with each other like true merchants. As a mere exercise this does not seem to be bad, but it is entirely insufficient as a scheme of instruction. One sacrifices theory to child's play and to a supposed reality which in fact does not exist. Is it not a strong deception to believe that you can find, even among the best pupils, young men capable of doing real business service at the time they leave school? One can certainly not instruct in all the branches of business. Which branches shall one choose? At the Polytechnic School, for example, the purpose is to train engineers and officers for special departments. One might believe that each group should follow a course appropriate to the career chosen by its members. But this is not at all so. The pupils, without exception, follow the same courses, and in consequence these courses are absolutely theoretical. It is only on graduation from the Polytechnic School that the young men enter the schools of application, where they pass two or three

years, and from which they graduate as engineers or soldiers. Why should one take up any other plan in the training of merchants? Is there any reason to complain of the results obtained at the Polytechnic School? Are not our engineers sought for throughout the entire world? Cannot one say without exaggeration that most of the railroads of Europe have been built by them? The various branches of commerce are more numerous than the careers open to young men leaving the Polytechnic School. But there is a body of knowledge common to all these branches, and their generality necessarily implies a general theoretical instruction."

The conclusion of this line of reasoning is that the schools of commerce must be made polytechnic schools, to which business houses shall stand in the relation of schools of application.

* * *

These two extreme methods of regarding commercial instruction have each its own value, for they contain each a part of the truth.

So far as the first line of reasoning is concerned it is necessary to consider the very difficult circumstances under which the schools of commerce, established since 1870, were placed. It is also fair to take account of the current of opinion favorable to the practical instruction which prevails with us, especially in commerce, where one denies the efficacy of a purely theoretical commercial instruction. Finally, for the class of pupils compelled in great part to leave school for the employment of the office or the bank, is it not necessary to attempt to communicate rapidly the knowledge by immediate use? It was then under the pressure of these various influences, and on account of the necessity of recruiting their classes, that the managers of our schools of commerce have elaborated their programs, from which they have omitted everything which did not seem to be directly related to commerce, and absolutely essential to its study. On the contrary, at the Superior School of Commerce at Paris, attended by the children of merchants in easy circumstances, one has been able to work out a three-year curriculum, less elementary, more comprehensive, more general; where theory predominates over practice, perhaps to even too great an extent, and an effort was made from the very beginning to establish a program of studies which carefully worked out should not be inferior to-day, from a scientific point of view, to that of special secondary instruction. On this fact is based the charge that in this school everything is sacrificed to theory. They are, however, following a correct view of things, inasmuch as they wish that all special instruction should be solidly based upon general instruction. Moreover, so long as the superior schools of commerce are aiming to attract graduates of secondary instruction they must take care that the latter on entering these schools should not find themselves engaged in a course of study a degree lower than that which they have completed in the colleges or lycées.

At Mühlhausen, and later at Marseilles, Lyons, Rouen, Havre and Bordeaux, they preferred to model their schools after the institute at Antwerp, without noticing that the examinations for admission into the last named institution are relatively high, and in these schools they fixed from the first the length of the curriculum at two years, though it had been established by long experience that three years of which one may be a preparatory year constitute the minimum period necessary to higher commercial instruction, unless the pupils are Bachelors of Science, or of special secondary instruction. The institute at Antwerp itself has added a preparatory

class, and our schools at Lyons and Marseilles have done likewise. We believe that the instruction in our superior schools of commerce must, without distinction, follow the example of the school in the rue Amelot in everything which relates to science. A reform of their programs in this direction would offer the advantage of putting them in a position to receive the bachelors of special secondary instruction, when the movement of public opinion brings these last to them, a thing which will soon happen.

In consequence of the assimilation of the special baccalaureates and of the classical baccalaureates, other things remaining the same, this modification of their programs would also give to the schools of commerce an opportunity of preparing for the examinations those of their pupils who desired to join a university degree to their diploma.

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But in the eyes of the partisans of practical instruction a good commercial apprentice is not necessarily a college graduate; quite the contrary. A good commercial apprentice, they say, is the man who knows how to cipher well; to keep books well; who has good notions of commercial geography; who has learned to recognize raw materials and manufactured products; who can reckon up figures rapidly and transportation charges; who knows how to cast up an account without omitting anything; and who speaks several languages. "This is our object," they say. "Ours also," reply the partisans of theoretical instruction. But instead of deceiving ourselves as to the value of pretended practice, which can never even from an empirical point of view, take the place of practice with real things, we think we ought to apply the precious time of the pupils to theoretical studies which have become essential to the epoch of scientific progress. A man, they continue, may know how to cipher well, know how to keep books well, and still be a most pitiable merchant. How often does one see good accountants, who, puffed up by the conviction that they are the chief cause of the success of the house that employs them, set up for themselves after they have made some savings, and become bankrupt in a short time. The calling of a merchant demands a complex of qualities which cannot be acquired at school, and which render it one of the most difficult of all. The most important of these qualities, which everyone thinks he possesses, but which is the rarest of all things, is clearness of judgment. The love of labor, order, economy, initiative enterprise, scrupulous honesty, commercial sense are also other indispensable qualities for the merchant. Do you pretend to teach these things?

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Let us try to sum up the valuable points in this discussion, which dates from 1866, the time of the establishment of the school at Mühlhausen and which threatens to become eternal. For this purpose let us begin by formulating the pedagogical spirit underlying these two methods.

On the one hand one has limited the amount of time given to general instruction for the benefit of special instruction, and of the professional instruction based upon numerous model exercises which we have described under the head of the Institute of Antwerp.

On the other hand, the endeavor is made to strengthen general and special instruction, and the applications of the commercial theory in model offices are limited to the minimum, leaving to practical life the work of finishing, from a professional point of view, the studies commenced in the school.

The first question which presents itself to us would then be this:

Should commercial instruction give the preference to practice over theory?

Upon this point, which divides the schools and the opinions of merchants, a majority of whom are favorable to practical instruction, we believe there can be no difference of opinion in an epoch of industrial progress like ours, where the level of instruction is coming up on all sides, as to its being absolutely necessary to base commercial instruction upon a general scientific instruction as complete as possible. Certainly we must have recourse to practical applications, but one must not forget that application is simply putting into operation the principles and the rules which constitute the science itself. Theoretical instruction must, therefore, have precedence. Above everything else a commercial school must be polytechnic, that is a liberal school.

The second question is the following:

In what way and to what extent shall technical instruction, in practice, be associated to either general or special theoretical instruction?

In answer to this question we would reply that the fictitious exercises of the model offices are insufficient. Just as one shows to the pupils who expect to be engineers, farmers, physicians, officers—true mines, true bridges, real farms, real patients, real fortifications, real cannons—in the same way one must show and lead the pupils in the commercial schools to study real business and commercial houses, real accounts, real documents, real transactions. Professional study is limited to science, but one does not prepare practitioners without practice, and it is necessary that this practice should not be simply fictitious. The school of commerce will be then at once a school of polytechnics and a school of application.

The third question is as follows:

Can commercial instruction develop the moral qualities which make a good merchant?

This third point, more delicate than the two preceding, does not, however, give us more trouble. One must demand of a good education all that which it is able to give. To pretend that the qualities demanded in business could not germinate and develop in the commercial school is to place commercial instruction a degree below that of other special schools, and consequently to deny the value of this instruction. The painter, singer, soldier, priest, missionary, physician follow careers which demand, besides the appropriate knowledge, special qualities which the school knows how to increase or to beget in the individual. The moral qualities which make a successful merchant are in the same way acquired by an education properly ordered and methodically pursued. Instruction must always be educative, and just as one inculcates patriotism in the soldier, humanity in the physician, self-denial in the missionary, the cultivation of science in the scholar, devotion and culture in the teacher, love of beauty in the artist; in exactly the same way the aptitude for commercial affairs, a desire for work, the love of order and economy, the spirit of enterprise, clearness of judgment, probity—all qualities which make a good business man—can be taught in the schools of commerce. It is here a question of the direction to be given to the instruction; a question of training, of discipline.

These are the results which one must try to accomplish, and the means of doing so can be found. The self-control of the priest, the bravery of the soldier, the fiery oratory of the advocate, even the skill of extemporizing in the case of the artist and the poet are the fruit of exercise properly

devised, and methodically and daily repeated. In the same way the qualities of order, of economy, of foresight, of judgment, of integrity, of equity can also be obtained if one knows how to develop them. The commercial sense itself, or the sense for commerce, the sense for business would not be an exception. Besides this each profession possesses a fund of experience, of prepared rules and precepts—of trade secrets, so to speak—which is not the exclusive possession of any one person, and which a good scheme of instruction should have and know how to propagate.

* * *

CONCLUSION.—To sum up the matter of commercial instruction, all the efforts must be devoted to develop in the pupil the theoretical and practical knowledge, and the moral qualities which a business career demands. It will be then at once general, special, professional and moral.*

It will be general by its program of the sciences; it will be special by the direction given to the pupils about commercial things, by the importance given to the study of accounting; of industrial and commercial economy; of living languages; of penmanship; of geography; of history; of law; of legislation; and of political economy. It will be professional by the careful study of that which goes on in business, banking and commercial houses, where one regards order and method by practical application and by the study of things. And, finally, it will be moral because the work, properly directed, impresses good habits upon the youth, and because the economic instruction results in an elevated and morality-producing philosophy.

Critical Examination of the Actual Programs of Study.—Let us take up then one by one the more important subjects and indicate the modifications which seems to us desirable in commercial instruction.

Accounting.—In examining the programs of the commercial schools one sees that a more and more important place has been assigned in their instruction to accounting. It is plain that in doing so they have yielded to the steady pressure of public opinion. But were they prepared to fill up the numerous hours given to this instruction in a thoroughly satisfactory way? We do not believe that we are wrong in saying that even the directors of the commercial schools themselves consider that the enormous amount of time given to exercises in accounting is out of all proportion to the real value of this instruction, and, consequently, to its results. It is necessary then to make a reform at this point. Must one reduce the number of hours given to the study of accounting? Is it not rather necessary to modify this instruction and to organize it on a different and more rational plan? It has been accused of oscillating in an uncertain manner between theories—badly formulated—and practical errors upon which the professors base their courses and the fictitious books which they require their pupils to keep in the commercial bureau. We believe that instruction in accounting should strive to become at once more scientific and more practical. It must get out of the stationary state in which it is at present. We think that while studying seriously the scientific theory the schools of commerce would find it to their real advantage to turn their attention to actual practice. We should like to see their museums enriched with administrative materials, which, methodically arranged by the professors, synthesized by means of their summaries

* The distinction which is here made between special and professional instruction is not without importance. Special instruction can be given outside of the profession itself, it may engraft itself upon the instruction given in the exercises of the model or fictitious office. Professional instruction grows out of the practice of the profession itself.

or graphical illustrations, accompanied with explanations, should constitute the material for lessons in things relating to accounting and administration. In consequence, the greatest effort should be made to enable the professors to carry their instruction in industry, banking, commerce, agriculture, and the great branches of administration into the field of practice itself, without being obliged to go outside of the school. In this way all the exercises from that of the preparatory class up to that of the third year might be based upon the materials of actual business. Moreover, during the entire course of the study the pupils should be furnished with documents of every sort, the fac-simile of real papers referring to the various operations of the accountant or manager of which we have just spoken. The collection of these documents, their distribution in connection with the matters discussed and the various correspondence which they have occasioned, the keeping of various books relating to these operations would constitute an actual lively instruction which would interest the pupils very much. There would be, in fact, under their very eyes, the foundry ; the office ; the bank ; the farm; the great branches of administration; etc., less the raw materials, the manufactured products, the cash ; plus the demonstration of the professor.

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We believe it is not necessary to insist upon the value of such an instruction as this at once analytic, and synthetic, based upon actualities substituted for the more or less fantastic exercises of the fictitious office. After having been initiated into the first theoretical and practical notions, the pupil would be able to obtain from the programs, well constructed, at a glance the system of accounting and the various branches of any given enterprise. He would follow the foundation and the series of operations in examining the books and correspondence relating to them. He would understand the purposes of the various documents; their relations to one another, their centralization ; their results. His attention, at first concentrated upon matters of detail, would gradually rise to a conception of the whole. Afterward he would form little by little comparisons between the various branches of accounting and administration which had passed under his eyes.

This study would then become an object of a distinct course in comparative accounting, in which the professor would pass in review the various methods of keeping books used in actual practice ; methods whose special advantages and disadvantages he would set forth and discuss from a theoretical point of view. Upon a selected topic from real transactions the pupil could be exercised in the practice of these various methods : English, German, American, synoptical, logis-mographic, etc. Here also the different systems of accounting, constructed in accordance with these methods, would figure in the museum of the school, and would be set forth in graphical tables which would synthesize them. Finally, the professor arrived at this point in the course could direct his attention to the great systems of accounting in mining, metallurgy, sugar industry, transportation companies, farms, banks, insurance, and, lastly, public accounting.

Thus organized and pursued, we believe that instruction in accounting would really merit the place which is given to it at the base of economic instruction ; that it would increase the favor accorded to our schools of commerce ; and that our commerce and even the country itself would gain considerably in the near future.

Commercial and Industrial Economy.—This course which we do not find figuring in any program ought to exist in all the commercial and industrial schools. It would find in great part its substance in the materials of the preceding course, of which it would be the development, and, so to speak, the crown. The professional truths derived from the facts relating to commercial and industrial experience would complete its subject-matter.

"Wherever human industry is developed and concentrated," says M. Courcelle-Seneuil, "there a tradition is established. The founders of enterprises transmit to their successors these traditions, these devices whose truth their experience has led them to recognize, and which one may rightly consider as principles—their maxims in commerce, in manufacture, in agriculture; and in each of the sub-divisions of these three great branches of human industry."

Some of these truths are purely technical in character; others have a higher significance. One should teach the pupils how to become good employes, good buyers, good sellers, good cashiers, good accountants. But the art of buying and selling—that of paying and receiving—and that of recording these operations do not constitute the whole science of commerce. For a good purchaser, a good salesman, a good cashier, and a good accountant would not be sufficient to ensure the success of any enterprise. It is also necessary that these enterprises be well organized, well administered, well directed; and the art of organizing, administering and directing is based on economic science in this sense, a necessary complement to industrial and commercial science.

Without contesting then the utility of courses in political economy, which contain, so to speak, the general philosophy of commercial instruction, we should like to see in the programs of our schools of commerce a course in commercial and industrial economy, from which the pupils would derive great professional gain. We shall content ourselves here with indicating the outlines of this important course: First, of the various kinds of commercial and industrial classification; second, the capital necessary for various enterprises; the necessity of determining this exactly; the establishment of the business; the study of the laws; third, of merchandise; of the raw materials; of the margin of the markets; fourth, of the workmanship; of general costs; of gains and losses; fifth, commercial and industrial organization and administration; sixth, the importance of accounting in methods of control; the exact determination of the selling price; the keeping of inventories; seventh, of the conduct of the business; of the material and moral conditions necessary to its success; of credit; of the general methods of conducting it; of the means of getting rid of middle-men; eighth, corporations—the great branches of administration; methods of liquidation, etc.; ninth, of the duties of the employe; of the merchant; of the agent; of the shareholder; of the manager, etc.

Besides their own personal studies the professors would find excellent help for such courses in the following works: "Philosophy of Commerce," by M. Stirling; "The Duty of the Merchant—Conscience and the Science of Duty," by M. Oudat; "Commercial Practice," by M. Devinck; "Manual of Business," by M. Courcelle-Seneuil; and especially in the excellent treatise on "Industrial Economy," by M. Ad. Guilbault, a very remarkable work relating to this subject.

Private Economy.—Domestic or private economy is at the base of the

preceding. He who does not carry order into his personal affairs, in the management of his own house, will not find it easy to carry this principle into his business house. If it is wrong to expend too much, it is a still greater wrong to expend without keeping accounts. Whoever does not keep accounts is doing business on a venture. Whoever keeps accounts reflects or will reflect. Confidence and credit desert the prodigal. Credit is the nerve of business; a house of any importance cannot sustain itself by its own resources.

The future merchant must learn habits of economy and saving, which is nothing more than putting into practice the lessons which he has learned. Commercial schools have then the duty of developing these habits by obliging the pupils to save, and invest their savings, however modest they may be. These savings should be evidenced by a savings bank book, or by the purchase of securities of some sort, or by the payments of special premiums which our companies should inaugurate for the benefit of the schools. If one should agree to this view, a co-efficient of order and economy might be introduced into the examination mark, similar to that of industry and good conduct. It is then by training the judgment of the pupils and by endeavoring to develop in them the professional knowledge and the moral qualities of order that schools of commerce will fulfill most completely their educative mission and that they will do service to commerce.

Arithmetic, Algebra and Geometry.—Besides being indispensable to the study of science, mathematics and notably geometry exercises a happy influence upon the reasoning power of man. Instead of desiring to limit this instruction, therefore, one must develop it without losing sight of its special application to business. Let us ask the instructors to give some time to mental arithmetic, an excellent exercise for a future employe or merchant. In theory, arithmetic offers combinations which are infinite, a circumstance which the makers of school arithmetics have abused. In current practice one is ordinarily limited to operations of simple addition, subtraction, multiplication or division, or to the rule of three. One should train the pupils to perform these various calculations very rapidly, as far as possible without recourse to the pencil; this sort of skill being very useful and much prized in practice. There is a large number of more or less practical processes of rapid calculation, a knowledge of which should be taught to all pupils.

The instructor should not omit to discuss the different methods of calculating insurance used by French and foreign companies and to seize this opportunity to emphasize the advantages of insurance for the merchant. In short we are particularly in favor of this sort of saving, and our commercial schools should convert their pupils upon this subject. We believe also that in return for this useful propaganda the insurance companies would not hesitate to form special combinations for the use of pupils and the instructing personnel, as well as the Alumni Association and the schools themselves, for which by means of annual premiums, provided for by gifts or by legacies left by the friends of commercial instruction, one could build up a capital which would ensure their future. Could not one in this way whether by means of gifts, or insurance, or grants, create retiring fees for the personnel of these establishments?

We believe that by taking up seriously a plan of this kind the most excellent results could be achieved. "Help yourself and heaven will help you" is an adage which ought to be in special favor in commercial schools.

One accuses our insurance companies of being merely routinists in their management. Is not the fault rather in commerce in general, which by adapting itself somewhat could have compelled these companies to certain concessions of a nature to render more easy the introduction and extension of insurance? For example, why should one not pay the premiums in insurance as one pays his taxes? This usage once introduced, the companies might draw bills upon the insured parties which they could pay through the post-office or otherwise. It is easier to pay small sums than relatively large annual premiums. One would popularize insurance in this way, and render it applicable from the school on. We do not care to insist on this subject at this time, contenting ourselves with calling it to the attention of the parties interested and to specialists. Beginning with the schools of commerce the habit of insurance, facilitated and simplified, would, without doubt, get possession of our entire education. These small insurances, subscribed by the boys at school, would be later converted into large insurances, and the cause of insurance would be definitely gained in France.

The professor of mathematics, as applied to commerce and finances, should also give special attention in the third year to the study of the functions of popular banks. In France, especially during the last few years, our capitalists manifested a tendency, more and more marked, to realize upon the funds invested in industry, and to employ them in mortgage loans, national securities, etc. These so-called "father of the family investments" will some day cause the rate of interest on good securities to fall below three per cent. During this period our commerce will gradually decrease. When the obligation of entering upon business enterprises shall be again imposed by the necessity of things, even upon large fortunes on account of the small rate of interest, we shall be obliged to return to labor, which is the true source of wealth. But will it not then be too late? Will not our industries have perished one by one, and shall we be able to resuscitate them again? But if on account of the lack of confidence, or indolence, or excess of prudence, the sons of the bourgeoisie maintain an expectant attitude, there is no lack among us of men who ask only for the opportunity to work, to engage in business enterprise, and certainly by means of farms, banks and popular joint-stock enterprises, we should be able to create a new supply of active producers. In a word, it has become necessary to make it possible for intelligent and properly educated men of the lower and middle classes to get out of the ranks of wage-earners, and to undertake enterprises on their own account.

Capital frowns upon labor, but labor does not frown upon capital. Germany has been specially benefited by its popular banks; credit has stimulated its industrial and commercial development. This question of banks is of special interest to our future. It is for this reason that we should like the schools of commerce to turn their instruction toward practical economy, and the study of the principal questions connected with it.

Among these questions that of the participation of employes and laborers in the profits of the enterprises in which they are engaged, deserves to be studied in the schools. Profit-sharing has already given results which it would be useful to make known to the pupils by showing them that it satisfies the sentiment of social justice, and that it is an element of stability and prosperity.

Penmanship.—One must consider penmanship at its real value, giving to it, in the eyes of the pupils, the importance which it really has in practice. Finally, penmanship is necessary to the work of the accountant and of correspondents. He who possesses a beautiful handwriting—an evidence of taste, of character and of method—possesses an almost certain means of finding speedy employment; his other qualities will do the rest. We know a number of excellent positions which began really with good handwriting. A request for employment, well written, makes a favorable impression upon him to whom it is directed. The commercial schools then should raise the co-efficient of this subject in order to favor a careful study of penmanship.

Stenography.—The study of stenography ought to be comprised in the program of the preparatory year. One would ensure the pupils in this way the ability of taking down, without mistakes, the lectures and of getting all the substance out of them. It is also of advantage to exercise the young men in expressing their thoughts easily by exercises in elocution, as is done in the schools at Marseilles and Havre, and those of the United States. But none the less important to train them in taking down rapidly the words of others. These two branches complement each other. In the United States stenography has become a very lucrative profession for both sexes.

Industrial and Commercial Geography.—It is no longer necessary to demonstrate the advantage of instruction in geography.

> "Geography," says M. Rauel Frary, "is the science which contributes most to make us educated men; that which procures for him who possesses it the most real distinction, the most incontestable superiority in social relations. That which enables him to obtain without pedantry the title of 'learned man.' Our other branches of knowledge," says he, further, "disappear for the most part with time, but this strengthens and develops itself continually. The books which are the most widely read next to novels are books of travels. The well-managed journal is intelligible only to him who knows geography, foreign politics, colonial politics, political economy."
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> "Look at the English journals," says M. Thierey-Mieg, "they are principally geographical cyclopædias. In each number is considered everything which occurs throughout the entire world. Why? Evidently because all this interests the English reader."

Commercial schools, we are happy to say, have always given a large place in their programs for the study of geography, even exceeding that in classical schools. They will perfect this instruction still more. They will see to it that their pupils familiarize themselves with the collection and study of commercial, industrial and political maps. Their efforts will be directed toward rendering as attractive as possible the study of a science which has always been treated in too dry a fashion. We wish that for this purpose they would establish conferences, which might be conducted by travelers or by the former graduates and subsequent holders of traveling scholarships. These conferences might be held in the evening in the lecture-rooms, and they could be rendered more attractive by the use of the lantern, by maps, by prints, photographs, etc.

The museum of the school should have relief maps of the principal countries, and its library should contain collections and photographs, history of travels, illustrated books, etc. Industry and commerce need to know their field, that is to say the whole world, to give to their efforts the most profitable direction. Geography enlarges the horizon of young men;

it shows a multitude of careers where their activity can find an employment far more profitable than the clerkship or government careers.

> M. Rauel Frary is right in saying "Let us say to short-sighted people who claim that emigration is useless because France is not yet thickly populated, and because we have not yet the surplus population to be sent abroad: Our bourgeoisie, in spite of its voluntary sterility, is too numerous. Its children strive with one another in government schools and in the public departments. In order to offer employment to this crowd of candidates the government creates new positions. Far from delivering the body social from these parasites the public is even increasing their multitude day by day. Emigration, whether to foreign countries or to the colonies, frees the soil of a useless encumbrance. It opens markets to our national labor. The success of those who go increases the welfare and stimulates the utility of those who remain."

The truth of this is proven by what occurs in Germany and Switzerland, where for a long time past the study of geography and foreign languages has been steadily developed. From this point of view the special secondary instruction of these two countries would seem to have for a chief end the training of emigrants.

Study of Railroads, Tariffs, Commercial and Industrial Equipment.—This course is closely connected with commercial geography. It demands special maps, indicating the courses of the railroads, canals, the navigable portion of streams and rivers, and the small and great lines of steamboats. These maps to be useful must be accompanied with indications of distances, points of departure, the length of the trip, the length of the voyage, etc. One would initiate in this way the student into a knowledge of the different tariffs of transportation. They would then learn to distinguish between the general, special and international tariffs of the railroads; a point in regard to which so many merchants are in ignorance. They would study the different systems of classification of merchandise adopted by the different companies, and varying with each one of them. They would be shown the advantage which is claimed for the application of one operation in preference to another, and to direct their shipments by keeping an exact account of the differences of price according to the line adopted. A similar course closed by careful study of the customs tariff ought to appear in the instruction of the school in the last year at least, and be entrusted to a specialist. The postal tariffs would also be a subject of instruction, of the practical study of which an example is already given in the instruction in the Practical School of Commerce and Accounting.

Finally, to render this study of tariffs as profitable as possible it would be necessary to place under the eyes of the students all the actual documents used in practice, and to imitate shipments of every sort to render them familiar with the subject. One will find examples of real operations in the accounting operations of which we have already spoken. In comparing the various methods of shipment by post, by rail or otherwise, one would set forth the exact differences. The same comparison would be made for the different methods of packing for shipment, and a study of the different methods of reshipment. In the lessons upon commercial and industrial equipment, transportation enterprises, docks, etc., present also matters of interest which it is not necessary to emphasize further here. These lessons would be supplemented to advantage by visits to the shops and

factories, and during the Easter vacation by trips to foreign countries, under the guidance of a director, as is now practiced in the Superior Schools of Commerce at Paris and Havre.

Commercial and Industrial Technology.—This course constitutes at once a part of the general, special and professional instruction. It should be given, therefore, in all three years, becoming more practical in proportion as the pupil advances, and finally ending in a comparative study of the means of transportation; tariffs; commercial and industrial equipment.

Raw and Manufactured Products.—A preliminary knowledge of the physical and chemical qualities of products will be acquired in the laboratory and in the sample museums of the school. Theoretical study, therefore, will form the beginning of this important course. The pupils will consequently be trained to distinguish the different types of raw materials and of manufactured products, and to recognize their essential qualities; their forms of production; and their value. They will be given general explanations as to the different processes of production, extraction and manufacture. The various adulterations will be explained to them, and they will learn to distinguish products little by little, either by sight, taste, touch, reactions, chemical analyses, or by microscopical investigations.

In the museum of the school general graphical tables will indicate the various forms of raw products, of the raw material, of colonial commodities classified in series. They will give general indications as to the commercial quality of the products. These tables will refer to geographical maps, where will be indicated by colors the zones of production, and the annual value of their exportation. Explanatory remarks in the margin of these maps will complete the commercial information and give useful statistics. The tables showing the production of cotton, silk, wool, sugar, coal, various metals, seeds, cereals will be well completed by diagrams indicating the variations in price of the most important mercantile commodities. This course, essentially practical, constituting the conclusion of the courses in physics, chemistry, mechanics, commercial and industrial geography, technology, etc., should not be limited to the explanations and manipulations in the laboratories and museums, and it is for this reason that the various schools of commerce have adopted, in a more or less intermittent form, the system of industrial visits, which, of themselves, seem to us insufficient. However wise the professor of technology may be who conducts the pupils into industrial establishments, he is often obliged to content himself with generalities. Each branch of industry has its trade secrets, which are continually modified. The encyclopædias and special treatises must constantly keep in touch with the practice. The pupil then, after having arrived at a certain stage of knowledge, would get more advantage from conferences conducted by specialists in the different industries. These conferences should commence in the very first year of the regular course; they would take place in the shops and even in the factories of such manufacturers as would consent to do so. One would pass then in review the different industries: silk; ceramics; glassware; materials of construction; paper; paste-board; chemical products; furniture; metals; leather and hides.

The Art of Buying and Selling.—Aside from the professional skill which is the result of the personal ability and experience of a merchant, the art of buying and selling conforms to certain principles which can be taught in the school. The various elements of the curriculum of the

commercial school should converge toward one end—to make merchants; and it would be surprising if this instruction were to stop at the very threshold of the culminating point of the science of commerce. Moreover, the operations of purchase and sale, carried on in a manner to leave a profit, a just remuneration, for capital, labor and the service which the merchant renders, presupposes a knowledge of arithmetic and accounting which enables him to fix the price at which things must be resold in order to yield a profit, as well as a knowledge of the market—its wants, its extent—and also of merchandise itself. The same operations carried on with foreign countries necessitate, moreover, the knowledge of foreign languages, of commercial usages and of monetary systems. All these branches of knowledge, and others also, constitute a part of the program of commercial instruction, comprising, moreover, the mechanism of the great speculation markets. What remains then to teach the pupil

The art of earning money, like that of winning a battle, must be tested in the field. But to win battles it is necessary to have studied tactics and strategy, and the various branches of knowledge relating to these subjects. We may then learn commercial tactics and strategy from former merchants who have retired from business, and are willing to devote the substance of that which they know for the instruction of young merchants. The results of their personal observation; the experience which they have gained from others; that which they have themselves acquired, these merchants might impart in a general way, or as they relate to certain branches of business. This course, which would not be the least interesting of those which we have described, would form the element of a technological conference of which we have already spoken above, as well as the course in commercial and industrial economy.

Marine Equipment.—This course corresponds to certain local wants. It is given at three schools: at Marseilles, Havre and Bordeaux. One must take care that this course is not extended unduly, and shall not become a course in naval architecture, which would be superfluous and could hardly be considered a part of commercial instruction.

French Language.—The work in the French language should be completed in the preparatory class. In the upper classes the pupils should occupy themselves with literature, history, reading, outlines of literary history, etc. This part of the instruction would relieve the minds of the pupils from the severe tension which the positive instruction requires. The merchant of to-day, moreover, ought not to be a stranger in the literary field.

Another reason, based on physiology, would require such instruction as this. Man is rather formed for action and contemplation, for physical exercise or for poetry, than for analysis and scientific abstraction. For this reason we would include gymnastics and literature in the economic curriculum, as well as music which is a form of poetry at the same time that it is an education of the senses. Monthly literary conferences should be held in the evenings, concurrently with the conferences in commercial geography. In these might be treated especially the literature of the different nations, and the more important recent additions to literature. Finally, the study of French, besides being the occasion of numerous oral exercises, which should train the style of the students, would be a good opportunity for commercial essays or abstracts of certain courses and accounts of the Thursday visits. Each pupil should be obliged to have his book of essays relating to things done outside of the school.

Foreign Languages.—We have already indicated certain modifications, which, in our opinion, ought to be introduced into the instruction in foreign languages in our commercial schools, an instruction, which, up to the present, has been modeled too exclusively upon that of the classical languages. Is it by reading the classic authors to her child that a mother teaches it to understand the persons who speak to it and to make itself understood by them? A child of five years of age has no idea of rules of grammar, while it may employ fluently and correctly a large number of words and phrases to express its thought at this age; it may already speak several languages. In Russia, Poland, Greece, Egypt and Denmark young children converse by turn in French, English, Italian and their mother tongue. We are acquainted with families in Paris from the colonies whose children speak five languages.

Under the influence of necessity a Frenchman residing abroad, or a person residing in France, learns very quickly to express himself in the foreign tongue—a few weeks is sufficient; with the aid of a teacher, a complete mastery may be gained in six months, at least so far as the wants of commerce demand. This result is due to the fact that the memory, ear and tongue are all trained at the same time. This circumstance indicates the proper method to be followed. One should turn our schools of commerce into a sort of French colony. Certain days should be fixed when each of the languages to be learned should be exclusively employed in conversation, outside of the lecture-room. The teachers of language, much more closely attached to the schools than they are at present, should be present at the meals, in the study-rooms and in the play-rooms. The non-instructing personnel of the school should be composed entirely of foreigners, each speaking two languages besides French. One would thus surround the pupils with persons required to converse with them in the languages designated, and never in French. In a word, one would create the necessity and the obligation to learn the language just as in a foreign country.

By this rational method, which demands simultaneous training of the memory, ear and tongue, progress would be much more rapid. In the three years of the commercial curriculum the young people accustomed to study would easily master three languages, and could learn to understand a larger number. One may object to the introduction of this method, thinking it would largely increase the expense of the schools. But as the old saying goes, "He who wishes the end must wish the means." One must pause to consider the results, for it is the results which satisfy the public and secure success. We are generally divided between the desire to instruct our children in foreign languages and the conviction that one can do this successfully only by sending them abroad. But as it is painful to send one's children away, and is, moreover, not always an easy thing to do, and finally as it may seem hardly reasonable to sacrifice a whole year for the sake of a single subject, it almost always turns out that nothing is accomplished. In this way the study of foreign languages among us is very limited. But would not things change altogether, to the great advantage of commercial schools, if this establishment should prove by positive results the possibility of teaching foreign languages in France itself? Then without doubt, by this fact alone, the commercial schools would attract public favor, and their classrooms would soon become too small.

Elocution, Conferences.—The ordinary business man certainly lacks facility of speech. Is it not this fact which keeps them, to the great damage of the country, out of the public legislative halls, which are left, so to speak, almost exclusively to the politicians, while the real interests of the nation demand specially the experience of men trained in business practice and accustomed to the difficulties of administration? Our commercial schools then should train their pupils to express themselves before an audience. They should accomplish this by repeated exercises in elocutionary reading; the students should accompany these readings with explanations. Finally, these exercises might be replaced by short debates upon given subjects, as is done at the schools of Marseilles and Havre. The director of the school might preside at these debates. The instructors in the office, and the teachers in geography, commercial law, industrial and commercial economy should also be present.

The questions should relate to the subjects in which instruction is given. From ten to fifteen minutes might be allowed for each speech. Each of the professors might correct the speech both as to the style and the manner of the pupil falling within his field of instruction. The subject to be debated might be indicated at the close of each discussion for the following day, and the referees appointed. The use of notes might be allowed to the debater, but he should not be allowed to read his speech. At the end of each debate, and after the pupils have gone out, marks might be given by the director and professors present, the same as at examinations. In order to give to these conferences the importance which they merit, it would be desirable for one of the members of the council of the school, assisted by several of his colleagues, to preside at least once a month.

In the course of his career the merchant is frequently called upon to defend his interests. He will certainly be able to do this in a much more efficient manner if he has been trained in public speaking. In the chambers of administration, in the syndical chambers, in the consular tribunals to which he belongs, he would certainly derive great advantages from such facility. Finally, commercial schools have also the mission to train instructors for the commercial schools, and for this purpose lessons in elocution are certainly very desirable.

Commercial Law, Legislation.—A knowledge, at least in outline, of the code of commerce and of the various systems of law, is necessary to the merchant. But we must not give too much space to this study for fear that the merchant, confident of his own knowledge, should come to believe that he could later disregard the advice of specialists, which would certainly be a source of danger. One should strive to give a practical character to this course. As a complement to the theory of commercial law each school should possess a complete collection of judicial and extra-judicial decisions carefully annotated, and which the professor might use to explain to the pupils the mechanism and usages of procedure, the turns to which it lends itself in skilfull hands, the contradictions of jurisprudence, the small basis there is to human justice, and finally the great advantage which even an unfavorable compromise ordinarily has over a successful law suit.

In our opinion the truly moral and practical side of this instruction would be in inculcating a respect for law, for the rights of others, and to make each pupil a sworn enemy to lawsuits. It is in this spirit that one should warn them against the many inconveniences and dangers of a suit,

which takes from business precious time and energy, which deprives the merchant of that tranquillity of spirit which he needs so much in order to conduct his business well, and which does not often accomplish anything else than empty satisfaction and the enrichment of lawyers.

Physical and Natural Sciences.—The elements of these sciences form a part of the general instruction which the pupil has received before entering the commercial school, and which will be developed in the direction of his specialties in the preparatory year.

Mechanics.—It would be an injury to abolish this course in which the student learns so many useful things, among others the value of the machines for the transmission of motion; the various forms of engines; steam, gas, water, air, electro-magnetic, etc. The elementary study of mechanics is as necessary as that of physics, chemistry or natural history.

Drawing.—The same thing is true of this as of the preceding subject. The study of drawing finds its application in the construction of graphical figures, diagrams, maps, sketches, etc. Drawing exercises the eye and the hand; it develops a taste for form; it unites positive instruction to matters of art, both pure and industrial, in whose production commerce largely deals and which, therefore, merchants must know how to appreciate.

History of Commerce.—Might we not as well entitle this heading "History of Civilization?" Commerce has always played a very great rôle in the history of the world. It is that which binds together men and nations; it is that which supports progress in all its forms; it is the vehicle of ideas; it is the propagator of the beautiful; of the valuable, of the good and the useful.

The history of commerce, connected intimately with that of humanity, gives elevated views of morals and philosophy, views which are drawn from the facts and which give to the future merchants a just idea of the economic and social importance of the career to which they have devoted themselves. Before becoming analytic the history of commerce should then be treated in a general way, as is proper, moreover, in other subjects in which instruction is given. One must not lose sight of the fact that the pupil logically feels the need of knowing where one is leading him, and what purpose the subject serves in which one is instructing him. Nothing is better adapted to secure his attention than to give him in advance a general idea of the leading features of that which one wishes him to learn.

Political Economy.—The more carefully this subject is developed the more valuable it will be. Political economy is a matter of controversy to-day at almost all points, and the schools ought to beware of teaching their pupils disputable doctrines whether economic or socialistic. The professor should limit himself to setting forth the general facts of production, circulation and consumption of wealth; the different systems of exchanges, and the advantages and disadvantages which appear according to the zones of industry and commerce. This must suffice. Commercial instruction cannot have as its purpose the training of dialecticians, but rather of practical men who will derive more advantage from the study of domestic, industrial and commercial economy, than from the generalities of political economy which will remain matters of controversy.

We have explained elsewhere that these differences upon the point of doctrine spring largely from the lack of sufficiently exact and complete statistics, a defect which one must attribute to the general insufficiency of practical accounting. From this it results that even the facts of production,

circulation and consumption of wealth have thus far escaped a complete analysis, which might set them forth in a clear light. Political and social economy is, therefore, a science still full of obscurities and contradictions, and, consequently, a science the instruction in which should be carefully conducted in the schools.

Morals.—Morals is a complex of the ideas and rules intended to direct our actions. Morals is independent of religion, and is anterior to it. Every man has an idea of justice and injustice, of that which is good and of that which is bad, of that which he ought to do and of that which he ought not to do. Even the savages have their rules of family and social morals. The courses in the history of commerce, in the various commercial and industrial branches, in political economy, and the courses in law and legislation imply morals. Higher commercial instruction should include sociological studies from which morals might be scientifically separated, and not merely by the exposition of its principles which one knows without reasoning about them. Ethics, then, holds a large place in commercial education. It is a question of principle; it is also a vital question; a question of existence that our commerce should be and should remain true.

German commerce in the efforts which it is making to compete with ours is becoming more demoralized from year to year. Not only does it imitate, falsify and use false marks, but it cheats as to quality, and, consequently, as to price. French commerce, on the contrary, ought to strive to secure a reputation for excellence of its products, and for honesty in its transactions, where manufacturers would be convinced of the truth that honesty is a real force, just as order and as the love of labor, and that without honesty the relations between merchants and consumers cannot be permanent.

Our retail commerce, particularly that in cloth and food, is paying dearly at the present moment for losing sight of this truth. In fact our shopkeepers seem to be possessed of the strange idea that they have the right to cheat because they have paid for a license. Tell them that commerce is organized robbery, and they will protest only for form's sake, if they protest at all. They do not revolt under a sense of injury. Their conscience cries out to them: "You rob whenever you make a sale, every day, every hour; you rob in quantity, quality and price; you teach your wife, your children, your clerks to rob as you do. You rob the poor as well as the rich; you would rob your own mother, and if it is necessary in order to increase your profits that you should adulterate and poison, you become an adulterator and a poisoner. All this too without courage, for you rob and poison without running any risk. Your victims greet you, thank you, and are inclined to think that you are good honest men because you do not rob them more. But when tired of you your patrons flee from you on the very first occasion. Then go; run after them into the galleries of the great establishments whose competition is ruining you without mercy; into the markets; into the bazaars better equipped than your shops, and where one can buy at better rates. Go, beseech your patrons; try to excite their pity for the lot of the small shopkeeper on account of the competition to which he is exposed—you will then see how they ridicule you."

After twenty years more at this rate our small shopkeepers will have disappeared in Paris and in the large cities. See to what end piracy leads!

Let us avoid a similar fate for our wholesale trade. Let us preserve a precious reputation for thorough honesty, which will sooner or later bring back to us the consumers who for a time are led away by the artifices of our rivals.

The properly constructed program of commercial instruction then condemns such piracy and constantly pleads for order, good faith and honor. It is for this reason that accounting, a science of order in accounts should be kept at the very head of this program—accounting—the history of the facts of human labor in numbers; accounting, hated by the pirates who practice in the dark and do not love to face their robberies; accounting, whose accurate practice will save our industry by spurring on its progress, still hesitating and uncertain for lack of this orderly principle.

Let us go into a great factory, where we see exposed small objects cut in bone and ivory. And as we go into ecstasies over the cheapness and the fine workmanship of these objects, the merchant remarks to us: "Here are some made in Switzerland and Germany; I am going to astonish you. Not only are they more poorly made than ours, but they cost more. This is easy to explain; our Parisian laborers are more skillful, do double the work in the same time, and you see that the workmanship is much more elegant." Is not this a typical example? The manufacturer adds: "You have just organized a system of accounting which has enabled me to reform my system of manufacture. In consequence I have diminished my capital; reduced my business expenses; cut down the useless general charges; increased the general productive charges; perfected my equipment; interested my personnel and my laborers in the welfare of my enterprise, etc., so that to-day I find it to my advantage to manufacture in Paris, and the foreigners purchase of me. People pretend that French manufacturers cannot stand competition, and give as a reason that labor is dearer here than elsewhere. Ill-will, routine and ignorance have much more to do with our inability. The truth is that labor equalizes itself in all industrial centres. It is to be had cheaply only where it is not in demand.

"The truth is also that we have accustomed ourselves to buy at high prices whatever gives a large profit, without being obliged to reckon closely. The truth is also that whenever we wish we can sell at as low a price and as good a quality as our competitors. It occasioned great expense, I admit, to change my method of doing business, but to-day I count myself happy for having taken in time a step which saved me from ruin and transformed my industry. If other manufacturers would do likewise we should have nothing to fear from our neighbors."

"You speak to me of commercial morality," adds our interlocutor, "it is indeed a subject of great importance, and upon which you rightly insist. Commercial morality is not an illusion or a myth as paradoxical or prejudiced people may pretend. There is no social department in which practice must conform to thorough honesty more than in ours. Even the soldier does not introduce greater regularity into his life than the merchant, who is worthy of the name, must into his. No one has more care than he to fulfill engagements once entered into and his word once given. I repeat it, we must and can carry on business in an honest way. This is to be our force; this will be our glory! Our city is skillful in labor; it has taste; it has inventiveness—this is essential. When our education in matters

relating to commerce and industry shall be well organized, and when we shall conform our lives to this instruction we shall be invincible."

Music, Bodily Exercise.—Music is the education of the senses, and this reason alone would determine us to include it in professional instruction. Experience in affairs and relations of life shows, moreover, that the possession of an agreeable art is often a valuable means of success, by making the circumstances favorable to the individual, to say nothing of the fact that it is a good preservative from the dangers of ennui and idleness. Finally, in a school where the courses of study demand a continued tension of the mind toward science and the positive subjects of commercial economy, nothing will relieve the pupil better than music, which like drawing; like literature; like the bodily exercises in the gymnasium and fencing hall, enters into the hygiene of a well-balanced education. A good system of instruction must respond to the various wants and aspirations of man. It must conform to the law of contrasts, without this it would produce a destruction of the just balance in the moral and physical health of the pupil, resulting in lassitude and disgust.

Lessons in vocal and instrumental music might be given in the evening after the study hour, from nine to ten o'clock. They could alternate with conversation hours. They should be obligatory like the other branches and gratuitous like the lessons in gymnastics and boxing. Riding lessons, however, might be optional and extra.

Commercial and Industrial Visits.—These visits should be made every Thursday, not only to the shops and magazines of commerce and industry, but also to the various museums and public expositions. Such lessons being a part of the professional instruction, should be provided for in the formal regulations, and all schools without exception should be required to observe them. As it is not possible to give in a profitable manner lessons of this sort to a large number of pupils at once, the various classes would have to be worked in sections, going in different directions under the conduct of the special instructors. At the Commercial Institute, where this system has already been begun this year, most of the pupils are sent off each Thursday to several different places. The general application of this system would present the advantage of varying the lessons in technical things according to the previous preparation of the pupils, and by proceeding methodically by going from the simple to the complex.

General Considerations.—It is said that "silence is golden." If this proverb is true it does not apply to ideas which ought to be spoken. Our commercial schools have all rendered services which are not generally appreciated at their true value, because of the silence which one has observed in regard to it up to the present time, and which we believe it is our duty to break, if for no other purpose than to serve by our modest efforts a cause which seems to us intimately connected with the future prosperity of our country. Making all due concessions, the equipment of the French schools of commerce is not inferior in any respect to that of the other schools of general or special instruction. If one considers the efforts thus far put forth by them, the difficulties of every sort which they have surmounted, and the results which they have obtained in spite of these difficulties, one must be convinced that the evil days of commercial instruction are approaching their end, and that public favor will soon replace the indifference, as inconceivable as it is unjust.

Does not superior commercial instruction answer to the wants of all social positions, except possibly the so-called "literary professions," and indeed may we not say of them? For the lawyer, the magistrate, the public functionary, the councillor find it to their advantage to know the theory and practice of business. The employes in our commerce and industry, merchants, manufacturers, bankers, brokers, exchangers, farmers, that is to say all the active personnel of our interior and foreign commerce, ought they not to have this instruction in preference to any other? As to the families of fortune, who do not destine their children to commercial or industrial business, what better education could they give them than that which comprises in its curriculum the science of order and economy—knowledge necessary to the preservation of a fortune. Practical arithmetic, accounting, living languages, the elements of civil and commercial law, and the many other subjects, are not these branches more necessary to the modern mind than Latin, Greek, ancient history, etc.? What then is lacking in this economic education to make it in demand?

It lacks only the sanction which crowns university studies. It is not sufficient to open the doors of entrance into the schools of commerce, one must also open the doors of exit. Nothing further can be done until the legitimate demands in favor of economic instruction shall be met and it shall be put on a par with classical instruction.

C.

HIGHER COMMERCIAL INSTRUCTION IN GERMANY.

Germany has, in many respects, the most fully developed system of commercial schools of lower and higher grade in Europe. As the subject of this work relates primarily to commercial high schools, it will not be necessary to do more than mention the large number of primary and secondary schools of commercial instruction to be found within the limits of the German Empire. The work by Harry Schmitt* gives a very full account of the present extent of commercial education in Germany. A statistical table, referring to the same subject and published in Glasser's work,† brings the data down to the school-year 1892–93.

It appears from these works that there are some fifty-five schools in the German Empire which may be classed under the head of commercial high schools, with a total of 5681 pupils. Many of these are supported by Merchant Guilds, a number by the cities and a few by the State. The commercial classes and commercial courses organized in connection with the real schools are, of course, supported by the State or city respectively.

In Germany, at a very early date, the better class of commercial high schools obtained for their graduates the privileges of the one-year military exemption law. This had a very beneficial influence upon the attendance at these schools, and the fact that no discrimination, in this respect, is made against commercial high schools has, undoubtedly, contributed very largely to the success of these institutions.

THE PUBLIC COMMERCIAL INSTITUTE AT LEIPSIC.

(*Oeffentliche Handels-Lehranstalt zu Leipzig.*)

Of all these schools, the Public Commercial Institute at Leipsic is, perhaps, for our purpose, the best type, and as it is the oldest of the existing schools it presents, to a certain extent, a picture of the development of this branch of instruction in the German Empire.

This celebrated institute owes its origin to the Merchant Guild of Leipsic, a corporation which has existed since the year 1479, and whose numerous special privileges were ended with the introduction of commercial liberty into the kingdom of Saxony in 1861. In 1867 this corporation became an open society. Shortly before this time a ministerial ordinance had established the chambers of commerce for the purpose of representing commercial interests.‡

Five of these chambers of commerce have been established in Saxony. There was nothing more, therefore, for this ancient Merchant Guild of Leipsic to do, except to watch over the interests of the schools of commerce; to help, with the considerable fortune which it possessed, certain needy merchants, and to assist other various public enterprises. It devoted itself to this useful mission, but as no new members could be chosen the extinction of this guild was only a matter of time, and in consequence of an agreement between this guild and the Chamber of Commerce at Leipsic the

* "*Das kaufmännische Fortbildungs-Schulwesen Deutschlands.*" *Seine gegenwärtige Gestaltung und Ausdehnung Berlin, 1892. Verlag von Karl Siegismund.*

† "*Das commercielle Bildungswesen in Österreich-Ungarn.*" *By Franz Glasser. Wien and Leipzig. Alfred Holder, 1893*

‡ *Leauley's "Écoles de Commerce,"* p. 480.

school became the property of the latter body and is supported by the same, using in the first instance the income of the funds which belonged to the former Merchant Guild.

The hónor of persuading the Merchant Guild to found in 1831 a practical and theoretical School of Commerce, belonged to Charles Lebrecht Hammer, a member of the firm of Hammer & Schmidt. The Commercial Institute of Leipsic was not, it is true, the first school of this sort established in Germany. A man named Busch had established, at his own expense, an Academy of Commerce in Hamburg, toward the close of the last century, and this academy had prospered for some time. The Merchant Guild of Gotha had a school for apprentices in commercial houses from the year 1818, and finally, in several of the larger cities of Germany there were private schools of this sort.

The Merchant Guild of Leipsic, then, cannot claim the credit of having been the first to establish such a school, but it was the first in Germany, we believe, to open a professional school, in which they proposed to train future merchants who desired to prepare themselves for business by appropriate theoretical studies.

While the common run of merchants declared, at that time, as generally in France, against this sort of preparation in a school, the Merchant Guild of Leipsic recognized, at that time, and emphasized the necessity of raising the level of special studies for those youth who were destined for commercial pursuits, and the further necessity of preparing the way for practice by a study of the theory. Such had also been the object, as we have seen in another place, of the men who established the Superior School of Commerce in Paris in 1820.

The foundation of the Institute of Leipsic was assisted by the Saxon government. King Anthony showed himself favorable to the enterprise and contributed from his private purse. In 1835, the Chamber of Commerce granted a subsidy of 1500 German dollars; this subsidy is continued at present.

One fortunate circumstance contributed to the rapid growth of the Commercial Institute of Leipsic. Its first director, David August Schiebe, was a man of great knowledge, of large experience, and at the same time of a very energetic character. He gave to the establishment an excellent organization. The severe discipline which he introduced, and the success which followed it, gave the school a great prestige.

David August Schiebe was born at Strasburg, in Alsace, on the second of October, 1779. He pursued his studies in the lyceum of this city, and was then entered as an apprentice in a commercial house of his native place. He was later a clerk at Strasburg, and from 1804 to 1807 was employed in a banking house at Frankfort. In 1807, he returned to Strasburg, and entered the house of Franck & Co. In his leisure hours he occupied himself with literary work, and gave lessons to young merchants. In 1817, he gathered a certain number of instructors about him, and his enterprise seemed upon the point of becoming a school of commerce. But the attempt was premature, and he was obliged to close the institution after two years. He then devoted himself to the direction of industrial enterprises, and acted as agent in most varied commercial affairs. In 1819, he published, in French, his theoretical and practical treatise on "Bills of Exchange;" a work which was followed in 1825 by his "Commercial Correspondence."

Some years after this, the school at Leipsic was opened. The directorship of the school was offered to him, and Schiebe hastened to accept a position which enabled him to spread his ideas, and to establish a system of instruction, the necessity of which he had been one of the first to recognize.

The necessary textbooks for this instruction were not at hand; Schiebe prepared them. His works on "Commercial Arithmetic," "Bookkeeping," "The Science of the Counting-House," exercised a wide influence upon the development of commercial studies in Germany. They appeared in a large number of editions during his life and after his death. "Even to-day," says Kippenberg, formerly director of the school at Gera, "Schiebe's books are the best to be found in this branch of instruction."

After having directed with great success, and in what may be called a truly practical manner, the school of Leipsic down to the year 1850, Schiebe retired from the management and returned to Strasburg, his native city, where he died the following year. His talents, his experience and his professional loyalty render his memory dear to all his former pupils. For his indefatigable devotion and for the didactic works which he left behind him, the school at Leipsic, and in general the professors of commercial instruction in Germany, owe him undying gratitude.

The successor of Schiebe from 1850 to 1862 was Alexander Steinhouse. After having been employed for twenty-seven years in the greatest commercial houses at Breslau, Venice and Tampico, he traveled in France, Germany, America and the Indies, and closed his career as a merchant at Riga. From that time on he devoted his activity to the study of the commercial sciences, and for ten years was professor in various public and private schools, and at last at Moscow. He devoted himself to the writing of pedagogical works, and published a Commercial Arithmetic in Russia. Under his direction the Commercial Institute of Leipsic improved its methods of instruction, and the number of its pupils went on increasing. In 1862 Steinhouse resigned his position as director, and went to establish a school of commerce at Breslau.

From 1863 to 1878, the director of the Commercial Institute of Leipsic was Dr. Karl Gustav Oderman. He had been professor in this school from 1839 to 1854, and was, consequently, fully acquainted with everything relating to it. He had, moreover, shown his ability for directing work by his assistance in the founding and directing of a commercial school at Dresden. Under his direction, the school of Leipsic preserved, in general, its former character, but it experienced numerous innovations in the scope of its instruction—innovations rendered necessary by the new school law of the Kingdom of Saxony, and by the educational reforms in Germany. We shall describe these changes more fully below.

Dr. Oderman also took up the revision of the pedagogical works by Schiebe, which remained, so to speak, the classical works in this school. In co-operation with Dr. Feller, Oderman wrote a Commercial Arithmetic, which has been a great success in the commercial world, and which is now in its fifteenth edition. Oderman resigned in 1878, and left the school with the reputation of an experienced master, of a scientific trainer of youth, and an energetic director. In recognition of these services, the King of Saxony, from whom he had already obtained several distinctions, accorded him the title of Professor.

Charles Wolfrum, who succeeded him in 1878 as director of the school, had been professor of the commercial sciences at the Commercial School

of Augsburg from 1851 to 1862; director of the school at Gotha from 1862 to 1872, and director of the School of Commerce at Augsburg from 1872 to 1878. He still holds the position of director at the Commercial Institute at Leipsic.

We shall have occasion later to speak more in detail of the organization of the institute, but to give a general notion of its development, it will be sufficient to note here that from 1851 to 1886 there were 5827 pupils in the Department for Apprentices; 5002 pupils in the Higher Department; 322 pupils in the Professional Course; making a total of 11,151 pupils in fifty-five years, or an average of about 202 pupils a year.

The Commercial Institute of Leipsic had in 1884–85, 472 pupils; 1885–86, 494 pupils; 1890–91, 620 pupils; 1891–92, 662 pupils; 1892–93, 681 pupils.

CHAPTER II.

DIVISION OF THE INSTITUTE; GOVERNMENT; FEES.

The Commercial Institute of Leipsic, as noted above, has been, since the twenty-first of December, 1886, under the control of the Leipsic Chamber of Commerce. It is under immediate supervision of the City Council of Leipsic, and under the general supervision of the Royal Ministry of the Interior. The school board, which has immediate charge of the school, is elected by the Chamber of Commerce, and consists of six members, elected for a term of six years, one-half going out at the end of each three years.

The purpose of the school, according to the Statutes published in 1888, is a two-fold one. One is to give the commercial apprentices an opportunity to obtain the necessary general education and special training necessary for their calling; secondly, to give the desirable scientific training to those youth who wish to devote themselves to commerce and similar careers. The school is, accordingly, divided into three divisions. First, the Apprentice Department, which is the continuation school for apprentices actually engaged in commercial houses, and whose pupils are relieved from the necessity of visiting the city continuation schools. Secondly, the Higher Department, which is authorized to grant a certificate, conferring the privileges of the one-year military service law upon those pupils who complete the course in this division. Thirdly, the Professional Course, whose purpose it is to acquaint young men who have already acquired by study along other lines the degree of education necessary to secure the privileges of the one-year exemption law, with the general theory of commerce.

PROVISIONS RELATING TO THE VARIOUS DEPARTMENTS OF THE SCHOOL.

First: Apprentice Department.—Every apprentice of a Leipsic commercial house can be admitted in the Apprentice Department, upon showing his fitness to take up the work. Each candidate must pass an entrance examination. In order to be admitted into the third or lowest class, it is necessary that the pupil shall have completed an elementary school. To be admitted to the second class, he must show that he is acquainted with the subjects taught in the third class. Pupils can be admitted only upon the

request of the head of a commercial house, who thereby becomes responsible for the tuition of the pupil. The course of study extends over three years, including ten hours a week, divided as follows:

SUBJECTS.	Third Class. Hours.	Second Class. Hours.	First Class. Hours.
German	2	1	1
English	—	2	2
French	2	2	2
Commercial Arithmetic	3	2	2
Commercial Science	—	1	1
Office work and bookkeeping	—	1	1
Correspondence	—	—	1
Geography	1	1	—
Penmanship	2	—	—
Total,	10	10	10

The tuition is eighty marks a year. The hours of instruction are from seven to nine in the morning; parallel divisions attend from two to four in the afternoon.

Second: Higher Division.—This division has a three-year course. The year begins at Easter time; pupils are admitted at other times, only upon showing that they can take up the work with profit by a special examination. Pupils must be at least fourteen years of age. They must pass an entrance examination in German, French, Geography, History and Arithmetic.

The curriculum embraces the following subjects:

	Third Class. Hours.	Second Class. Hours.	First Class. Hours.
German	4	3	3
English	5	4	4
French	5	4	4
Mathematics	3	3	4
Commercial Arithmetic	5	3	2
Physics	3	2	—
Mechanical Technology	—	—	2
Chemistry	—	2	2
Study of Products	—	—	1
Geography	2	2	2
History	2	2	2
Commercial Science	—	2	—
Commercial Law	—	—	1
Office Work	—	2	—
Correspondence	—	—	2
Bookkeeping	—	—	3
Political Economy	—	—	2
Penmanship	3	2	—
Drawing	2	2	—
Athletics	2	2	2
Total	36	35	36

Instruction is also given as optional work in:

	Third Class. Hours.	Second Class. Hours.	First Class. Hours.
Italian	—	2	2
Spanish	—	—	2
Stenography	2	1	1

For foreigners in all the classes of this higher division the tuition is 360 marks a year; for natives of the empire, 240 marks in the third class; 300 in the second, and 360 in the first. A matriculation fee of 10 marks is also required.

Third: *Professional Course.*—As this is the most advanced class in the school, only those pupils are admitted who hold a certificate entitling them to the privileges of the one-year military service law, or who have completed an equivalent course. This department is divided into two sub-divisions: an Apprentice Department with ten hours a week, and a regular students' department with thirty-four hours a week. The course in both cases covers one year.

I. REGULAR STUDENTS' DIVISION.

CURRICULUM:

	Hours per week.
English	5
French	5
Spanish	2
Commercial Arithmetic	4
Commercial Legislation	2
Bookkeeping	5
Correspondence	2
Political Economy	3
Commercial History	2
Study of Products	2
Penmanship	2
Total	34

II. APPRENTICE DIVISION.

Into this course only such apprentices are admitted as hold the certificate mentioned above.

CURRICULUM:

	Hours per week.
English Correspondence	2
French Correspondence	2
Mercantile Arithmetic	2
Commercial Legislation	1
Bookkeeping	2
Commercial Science	1
Total	10

Instruction is given between the hours of seven and nine in the morning.

It will be noted that this institution is organized so as to answer the wants of a commercial community in a most complete way. For those young men who have had a good preliminary preparation, such as is involved in the completion of what we may call an ordinary English high school, and who have gone directly from that into business, there is found an opportunity in the apprentice division of the Professional Course to get assistance in the special or technical study of the business in which they are engaged. Those who are able to spend another year, after completing such a course as is mentioned, find in the Regular Students' Division of the Professional Course an opportunity to spend another year in preparing themselves somewhat more specially before entering upon a business career. This latter course corresponds very closely to the graduate course described in connection with the Prague and Vienna Academies of Commerce.

The second or higher division of this school corresponds very closely to what we should call an ordinary commercial high school, with a course of three years. It is evident that the pupil attending this department must give his entire time to the work of the school.

In the first, or Apprentice Department, an opportunity is offered for those clerks and apprentices in business houses, who have had the advantage of an elementary school education, to carry on systematic work, suited to their age and preliminary training, at the same time that they are engaged in commercial houses. It will be noted, as stated above, that the instruction in the Apprentice Department, both higher and lower, is given between the hours of seven and nine in the morning, so that pupils are able to attend these courses while actually engaged in business. It will be interesting to note the distribution of students among the various departments.

In 1892–93 out of 681 pupils, 454 were in the first, or Apprentice Division, taking the ten hour a week course through the three years; 155 were in the Higher Division; and seventy-two were in the Professional Course, of whom thirty-seven were in the Regular Division and thirty-five in the Apprentice Division.

The second, or Higher Division, corresponds to the regular course in the Academies of Prague and Vienna. It will be noted that the first, or elementary division, has by far the largest number of pupils, and to judge from the growing number in this department, it answers a real want in a commercial community like that of Leipsic. In the annual report of the Commercial Institute for 1892–93, the director expresses himself as follows upon one or two important matters connected with the curriculum of the school:

> "Wholesale and retail trade are as different in their methods of work as the ordinary work of a mechanic and that in a large factory. In training youth, therefore, for one or the other of these callings, the demands to be made are very different. To do good work in retail trade, one needs less comprehensiveness of knowledge than skill and reliability in the operations of simple business transactions. The curriculum of an ordinary public school gives the apprentice in retail trade, therefore, a satisfactory preliminary training. If to this be added certain instruction, in a properly organized professional school, the young pupil receives a scientific basis upon which the more ambitious of them can successfully build. And it will remain for experience to bring their technical skill to its highest degree.
>
> "But this course of study is very insufficient for a young man who wishes to occupy a more important position in the field of wholesale trade. It is a great fault in our commercial education that we are trying to reach by a simple supplementary course, such as that given in our first division, the same result as can be obtained only upon the basis of thorough preliminary training. This is sometimes done from ignorance, and sometimes from lack of resources. The large dealer has no less important functions to perform in a community than the educated individuals of other classes, and he can fulfill them satisfactorily, only if he is willing to give as much time and care to his education as the members of other classes are willing to give to theirs. We must allow to each youth an opportunity to obtain a well-rounded, general education first of all, and then before entering commercial life, a careful course in the commercial sciences and languages. Instruction of such importance cannot be carried on as a mere side issue, before or after business hours. It can only accomplish its proper result in case the pupils have a satisfactory

preliminary training, are of the proper age, and devote their entire time to the school. Such supplementary or continuation instruction, as is given in our first department, is and can be only a temporary resource. The object of this department must remain, therefore, so long as present conditions prevail, the education of the mercantile middle class for the work of retail trade. Nothing more can be accomplished by this method of instruction.

"The curriculum covers three years of ten hours a week; the subjects are indicated above. Very little is demanded of the pupils in the way of work at home. It is fortunate that the instruction can be given between the hours of seven and nine in the morning, or two and four in the afternoon, while body and mind are still fresh. Evening work along this line is almost useless.

"The attendance in this first division has increased from year to year, a proof that its advantages are coming to be generally recognized by our mercantile classes. In consequence of this growing attendance, it has been possible to divide the pupils into divisions according to their preliminary training. Those who are better prepared are put into the same divisions, and the instruction can be carried somewhat further and with better success than in the other divisions. As a rule, about seventy to seventy-five per cent of the pupils who enter have completed the curriculum of the public school (*what we in the United States should call the grammar school*) the others have attended the lower classes of higher schools. It is interesting to note that about one-fourth of the pupils who enter this department complete the three-year course. At the close of the second year most of these pupils have reached an age when they are no longer required to attend a continuation school, and it is seldom that their own desire, or the wish of parents or masters, is strong enough to persuade them to complete the course." *

In regard to the Professional Course, the director makes the following remarks in the same report:

"It has become more and more evident every year that the business circles of our own and other cities are coming to recognize the importance of our Professional Course (third department of the institute). Well-known manufacturers and merchants both at home and abroad are sending their sons to this course, in consequence of the favorable opinions of former graduates. We have received, and are receiving, from day to day, very flattering letters from former graduates and from employers. Indeed, it would be a cause for surprise if a year's earnest study of foreign languages and the various branches of commercial science should not have a permanent influence upon the intellectual development of the pupils. The extraordinary ability of the young German merchant, who is coming to be recognized in foreign countries, though in many cases with great unwillingness and with considerable envy, is no result of routine work. It is the consequence of careful and thorough training of our young people. Our mercantile classes should, therefore, derive new courage from this fact; they should rather make many steps forward than a single one backward.

* In the Kingdom of Saxony pupils having completed the ordinary school course to the close of the fourteenth year, are required to attend continuation schools, held either during the evening or on Sunday, or before or after business hours, for a longer period of two years and as the Apprentice Department of the Commercial Institute of Leipsic has been accepted by the school authorities as a continuation school, one finds in this an explanation of the growing attendance in this department.

They should be careful not to save time and money at the wrong place. A nation whose commercial relations are extending throughout all continents, whose mercantile and naval marine is well equipped for the very best service, whose banner waves over many colonies, needs merchants of insight, financiers of wisdom and inventive and enterprising organizers."

CHAPTER III.

PROGRAM AND METHODS.

Léautey, in his excellent work, so frequently referred to in this report, also calls attention to the fact that the Institute of Leipsic has taken special pains to divide and sub-divide its instruction so as to adapt it in the best manner possible to the wants of its pupils. The business of the retail dealer does not necessitate such special and comprehensive knowledge as that of the wholesale dealer. The small merchant can only rarely turn to a profitable purpose in his sphere of action, the knowledge of foreign languages, of mathematics, of algebra, etc. He needs, however, to be well acquainted with the goods themselves, to be versed in mercantile calculation, accounting, etc. The Institute of Leipsic has then established an elementary training, and a more advanced training for young men who wish to enter the wholesale trade.

In Germany, the youth of limited means generally enter business immediately upon quitting the elementary school. Those who take up commerce as a career complete their school training in a continuation school during the three or four years of apprenticeship, through which they must pass. They are required by law to follow the courses of these schools while serving their apprenticeship. Under these conditions, it is no great disadvantage for them to enter at an early age upon business life, which trains them in the handling of goods, in the proper conduct toward their customers, in bookkeeping, and in applying the knowledge which they gain in the school.

There are also the studies preparatory for more advanced positions, studies in which the Institute of Leipsic gives by far the largest share to theory, contrary to the method applied in the beginning by Schiebe. This development, a work of time, of circumstances, and of the difficulties which lay in the way of developing a suitable personnel to give the instruction, is worthy of careful study. Schiebe laid down a program of study which shows his preference for practical work; instruction in the science of commerce beginning in the second class, four hours a week. Schiebe himself gave this course, following the theory of commercial science by Jacob and his own works upon the subject; he thought that the pupil would arrive at a better understanding of commercial affairs if he actually went through the same process as the merchant in his office.

"This method is empiric," said Dr. Aymerick, "it offers, it is true, a certain advantage, it trains the pupils in acquiring a certain facility and external polish, but the real knowledge and training which is the essential part cannot be acquired by such an unscientific method."

Certainly, we answer, practical lessons ought not to precede theoretical lessons. But after the theory has been set forth, these practical lessons may come in to complete the training of the pupil and to enable him to derive the fullest advantage from the instruction in the school. It is, however, very essential that these practical lessons shall be well given. It is this upon which we have insisted in our plan upon the reorganization of commercial instruction. (Léautey.)

> "At the school at Leipsic," continues our correspondent, "many years passed before we had textbooks treating of the various branches of commercial science in a manner simple and clear. It was only as the result of long development that we came to see that the simple repetition of the same exercises, again and again, has only a very small value, if one does not penetrate into the very reason and spirit of the same. Everywhere we endeavored to discover a common law resulting from the unending variety of similar facts, and by this means to escape a useless prolixity. This is the road which scientific commercial instruction in Germany has followed to perfect itself."

Very well! But in this way has there not been a certain abuse of theory? Extremes meet, and they are ordinarily equally pernicious. We repeat what we said before, that the schools of commerce should be at once polytechnic schools and schools of application, and in order that application shall bear its best fruit it is necessary that it should be exercised not upon imaginary operations, but upon real operations properly conducted, properly systematized, and all the documents relating to which should be methodically brought together under the eyes of the pupils.

It would be superfluous to recount here the various modifications which were made in the Institute of Leipsic from 1831 to 1868; modifications which were suggested by the experience of the school. It is sufficient to say that during this whole period the basis of the method remained the same as Schiebe had instituted in the first instance. But in the movement for educational reform from 1868 to 1871, the Institute at Leipsic was compelled to follow the movement, or lose its title of a higher school. The law, relating to military service in Saxony, of the twenty-fourth of December, 1866, had conceded to the three schools of commerce at Dresden, Chemnitz and Leipsic, the right to give a certificate entitling to the one year military service privileges, and it was necessary to reorganize the instruction to conform to the requirements of this law.

It was, then, at this time, that the university tendency of general culture, began to overbalance the purely commercial instruction of early years, both at the Institute at Leipsic, and, in general, in all the higher schools of commerce in Germany. In all these institutions it was necessary, in order to comply with the provisions of the military law, to reorganize their curricula from the very bottom, and to give more time to the instruction in mathematics, physical and natural sciences, history, geography and literature. This reorganization implied the necessity of diminishing the time given to the commercial sciences, and also the importance of the practical exercises in the counting house.

It was not until 1869 that the Institute at Leipsic declared itself ready to comply with the legal provisions, and from that time on, this establishment acquired the right to give the certificate for the one-year voluntary service.

This change in its instruction led it, on the other hand, to enlarge the sphere of action of the school, in order to preserve its former professional character. It was noted that a certain number of pupils from the real schools, who held the Military Certificate, entered immediately into business life to spend the years which had still to elapse before they were of military age. These young men, from sixteen to seventeen years of age, while trained in modern languages, mathematics, history, geography, but entirely unacquainted with the commercial sciences, found themselves at a disadvantage in their practical careers on account of this lack of special knowledge. It appeared, then, to be plain that the Institute at Leipsic had here the task of creating a Professional Course for those young men who had obtained the Military Certificate. The success of this course, opened in 1876, did not entirely meet the expectations of its founders.

Three years later, in 1879, another attempt was made. By the side of the Professional Course, which comprised ten lectures a week, another course was established of from thirty to thirty-two exercises per week for those youth who held the Military Certificate and were willing to devote an additional year to study for preparation of the commercial career. This last course was received with considerable favor, and the attendance shows a steady increase. This result, although very satisfactory, shows that in Germany, as in France, public opinion is still in doubt as to the value of commercial instruction.

The director of the school expressed himself upon this point in the following manner:

> "It is thought," he said, "by large classes of our population that commercial practice can fully take the place of theoretical knowledge. It is, however, true that he who has a theoretical knowledge learns more from experience than the mere empiricist, to whom he will always be superior when it comes to a matter of judgment, or to execute intelligently an order, or to act with energy and decision in different situations, but many years will probably pass before the value of our technical professional instruction will be fully appreciated, and before the number of our pupils increases in proportion to the advantages which professional study assures to him who follows it thoroughly."

It is not necessary to print a synopsis of the courses, as the individual subjects taught cover very much the same ground, having due regard to the greater or less proportion of time devoted to them, as in the French and Austrian schools. It will be noted from a comparison of the curriculum given above with those of the schools in France and Austria that considerably more attention is given to the non-technical subjects in Germany. This may be explained, however, by the fact mentioned above that in order to get the privilege of granting the Military Certificate, these schools were obliged to introduce general subjects more largely, rather than because of any belief that the German curriculum in its present form is better than the French or Austrian.

It is not necessary to go into a more detailed discussion of questions of discipline, etc., as in this respect the Institute of Leipsic differs but little from those already mentioned. A glance at the budget of the school may, however, be of interest.

The school is carried on, under ordinary conditions, in such a way that a financial deficit regularly occurs, which is met by the Chamber of

Commerce from the proceeds of funds belonging to it. It is well housed in a model school building, erected in 1890. The budget for the year 1885–86 shows the following receipts and expenditures:

RECEIPTS:

Tuition from the Higher Division	32,751 71	marks;
" " " Professional Course	11,932 15	"
" " " Apprentice Department	23,585 27	"
Total	68,269 13	"
Subsidy from the Government	4,500 00	"
		72,769 13 marks.

EXPENSES:

Pensions and Salaries	63,662 61	marks;
Lighting	928 62	"
Heating	928 42	"
Printing	1,076 50	"
Books for Library	571 00	"
Chemical Laboratory	451 78	"
Miscellaneous Expenses	508 39	"
Rent	9,700 00	"
		77,827 32 marks.

D.

HIGHER COMMERCIAL INSTRUCTION IN BELGIUM.

THE SUPERIOR INSTITUTE OF COMMERCE AT ANTWERP.

(Institut Supérieur de Commerce d'Anvers.)

CHAPTER I.

HISTORY OF THE FOUNDATION OF THE INSTITUTE AND ITS SUBSEQUENT DEVELOPMENT.

The initiative of the creation of this institute which has acquired such a wide reputation belongs to M. A. Dechamps, Minister of Foreign Affairs in Belgium, who, in 1847, laid before the City Council of Antwerp and the Provincial Council, sitting in that city, a proposition to which these two bodies gave their unanimous consent. At the time at which the Belgian minister, concerned for the future of his country, proposed the creation of a superior institute of commerce (thus giving an example of economic foresight, which has been followed in France so far only by the initiative of our merchants), the subject set forth and supported by an Antwerp merchant, M. H. Matthyssens, had been fully treated by his parent, Dr. Matthyssens, in a monograph entitled "Proposition for the Organization of a Belgian University of Commerce and Industry." *

"University of Commerce"—the word was then in all mouths, but "There's many a slip 'twixt the cup and the lip." The official world and the Belgian universities were not willing to put upon the same level instruction in commerce and in the humanities. One substituted the title of institute for that of university, and the institute was established not by law but by a simple ministerial order, which placed it in a distinctly inferior position to normal schools, universities, academies and the intermediate schools of the kingdom, and interfered with its development for a long time.

Various circumstances intervened to delay the foundation of the Institute at Antwerp. Finally, on the twenty-second of October, 1852, M. Rogier, Minister of the Interior, incited by the monograph mentioned above and the arguments and reports by M. Loos, the mayor and Ostendorp, a councillor, accepted the basis of organization for the new school and submitted it to the City Council of Antwerp, asking its aid to the extent of paying one-fourth of the expenses; the other three-fourths being met by the State. On the following day the council unanimously agreed to the motion, which authorized the city to ratify the proposition of the minister, and to furnish, in addition, the complete and necessary equipment.

Finally, on the twenty-second of the same month, an order, countersigned by the king, established the institute, which was opened in 1853, with fifty-one pupils, of whom ten were regulars and forty-one specials. By regular pupils was meant those who entered for all the courses of the Institute, and by special pupils those who entered for a certain number (see Chapter II. below).

* See *Léautey Écoles de Commerce, p. 581 and following.*

The number of pupils who have attended the courses since the creation of the institute, was 3297, of whom 1905 were Belgians and 1392 foreigners. There were 1502 general enrollments and 1795 special. This enrollment gives an average of ninety-nine pupils per year, but in counting the period since 1868—when the matriculation fee was lowered to five francs and the fee for each course was fixed at thirty francs—the average number was sixty-eight pupils from 1852 to 1869, and 128 from 1870 to 1886.

The following table gives the statistics of the nationality of the pupils attending the institute during the last twelve years:

Years.	Total number of pupils.	Belgians.	Foreigners.	Native Country of Foreigners.							
				Germany.	France.	Switzerland.	Russia.	Sweden and Norway.	Holland.	England.	Other Countries.
1874–1875 . . .	132	81	51	17	–	2	5	9	6	4	8
1875–1876 . . .	136	74	62	28	3	–	3	7	6	7	8
1876–1877 . . .	130	70	60	18	3	5	7	7	7	2	11
1877–1878 . . .	125	79	46	11	3	2	4	4	5	2	15
1878–1879 . . .	150	107	43	15	2	1	2	4	2	4	13
1879–1880 . . .	137	81	56	25	3	5	4	4	4	2	9
1880–1881 . . .	119	76	43	18	2	3	4	1	3	3	9
1881–1882 . . .	120	79	41	13	3	2	4	2	5	2	10
1882–1883 . . .	111	67	44	15	1	3	2	4	7	2	10
1883–1884 . . .	126	74	52	14	2	7	6	1	9	1	12
1884–1885 . . .	139	81	58	22	1	8	8	–	8	1	10
1885–1886 . . .	136	81	55	13	3	2	5	–	9	4	19

The presence of so large a number of foreigners at the institute is a striking testimony on the part of the foreign countries of Europe to the excellence of this instruction. This testimony is by no means limited to being one which is merely honorable for the establishment concerned. The foreign pupils form friendships at this School of Commerce which are permanent and become later the occasion of important business relations.

CHAPTER II.

SUBSIDIES; SCHOLARSHIPS; GOVERNMENT OF THE INSTITUTE.

Subsidies.—The institute is supported by the Belgian government to the extent of three-fourths of its expenses, and by the City Council of Antwerp to the extent of one-fourth. The building and equipment of the institute are maintained by the city government of Antwerp.

Scholarships.—The scholarships, of which we give a list below, do not appear in the receipts of the institute. They are paid over to the pupils. These grants are not always utilized and the number assigned varies greatly from year to year. Thus the province of Antwerp, out of 8000 francs voted in the last eight years, has expended altogether only 1500 francs in scholarships to the students. The list of scholarships founded by the State, the provinces and the Alumni Association of the school is given below.

State Scholarships.—These scholarships were created by a royal decree on the sixteenth of October, 1878, and their value cannot exceed 600 francs; some fifteen in number are assigned exclusively to pupils of Belgian birth who have entered as regular students and have passed satisfactorily the entrance examination. The holders of these scholarships must apply each year.

Provincial Scholarships.—These scholarships, varying from 300 to 400 francs, are granted by the province of Antwerp, and serve for pupils of Belgian birth living in the province. The sum of 1000 francs is annually inserted into the budget of the province for this object. In the Brabant there are four scholarships of an annual value of 400 francs; also four in the Hainaut of 250 francs each. Four other scholarships of 800 francs each have been established by the Provincial Council of Liège in favor of pupils born or living in the province. The sum of 500 francs is also incorporated each year into the budget of the province of Namur.

Of the fifteen scholarships granted by the State, six are provided for in the budget of the Administration of the Interior, and nine are provided for by that of Agriculture and Industry.

The number of provincial and commercial scholarships is sixteen, of an annual value of 7500 francs, making altogether thirty-one scholarships of a value of 16,500 francs. The number of scholarships founded by the Alumni Association is two.

Government of the Institute.—The institute is organized on the plan of a university. In consequence the pupils do not live in the school, but find quarters in the city, according to the will of the parents, either in boarding-houses, especially established for students of the institute, or with the professors, or in private houses, on the conditions established in their prospectuses. The pupils of the institute are called students.

The practical and theoretical instruction of the Superior Institute of Commerce is comprised in a curriculum covering two years. Each pupil must matriculate annually; the matriculation fee is twenty-five francs. This fee is reduced to five francs for each course for pupils who take at least five courses. The student who has been admitted may obtain a general matriculation for all the courses comprising a year's course, or a special matriculation for certain indicatedcourses.

General Matriculation.—A matriculation for all the courses of the first year can be obtained only by pupils who have secured the title of "Pupils of the First Year," after having passed an examination of the sort indicated below. The fee for the general matriculation of all the courses of the first year is 200 francs. A general matriculation for all the courses of the second year can be obtained only by pupils who have acquired the title of "Pupils of Second Year," after having passed an examination covering the entire instruction of the first year, as indicated in the program. The general matriculation for all the courses of the second year is 250 francs. A student may matriculate for two succeeding years in the same class; he is then required to pay only half price for the second matriculation.

Special Matriculation.—The special matriculation may be obtained for one or more courses by persons who do not desire to pass the examination. It must be obtained separately for each course at the price of thirty francs, and if the student wishes to repeat it, at fifteen francs. The special matriculation in the commercial bureau costs 100 francs per year. This

matriculation can be obtained only by pupils who have previously been enrolled for at least four courses of the first or second year. Special matriculations may be obtained at any time of the year; no reduction in price, however, is made if the student begins at any other time than at the beginning of the year. No entrance examination is required for special matriculations, except in the commercial bureau where the students must pass an examination before the chief of the bureau, in the elements of book-keeping, French, German, English and commercial arithmetic. Special students cannot obtain any diploma upon leaving the institute. All the courses of the institute begin between the tenth and fifteenth of October. They are given in French; foreign pupils must perfect themselves in this language or they can make but little progress. The business of the commercial bureau is carried on in the chief modern languages.

Entrance Examination.—The entrance examination is held once each year during the first week of October, before a commission named by the Minister of the Interior, and presided over by the director. There is no examination at the Easter time.

Pupils who have obtained their graduating certificate in an athenæum of the kingdom, or in any other school of the same rank, or who have obtained a certificate of graduation from a German gymnasium, or who prove by acceptable documents that they are able to follow the instruction with profit, can be excused from the entrance examination, provided they have sufficient knowledge of the French language and of the English and German. Pupils who have attended the Latin schools must undergo an examination upon bookkeeping and chemistry; those who present a certificate of having studied the latter subject will be excused from examination in that subject.

Vacations.—The institute has annually two vacations. The first from the fifteenth of August to the second Tuesday in October; the other from the Monday before Easter to the second Tuesday after Easter.

CHAPTER III.

PROGRAM, METHODS, DISTRIBUTION OF THE TIME.

The theoretical and practical instruction of the institute is given within two years. However, a preparatory course, comprising the subjects of instruction prescribed for the entrance examination, is also maintained at the institute. This special school is open from Easter until the tenth of August. It has been established to render the entrance examination easy. Pupils who are attending a public school are not admitted to this course, at least not until after they have been six months out of the former. The minimum age of admission is sixteen and a half years.

Program of the Preparatory Course and of the Examination for Admission into the First Year.

I. COURSE IN LANGUAGES.

1. French Language. Grammar. Syntax. Composition. Correspondence.
2. German Language. Grammar. Syntax. Composition. Translation.
3. English Language. Grammar. Syntax. Composition. Translation.

II. BOOKKEEPING.

Single entry bookkeeping. Principal books. Auxiliary books. Invoices. Bills of lading. Bills of exchange. Laws relating to Commerce. Double entry bookkeeping. Sub-division of general accounts according to specialties (merchants, bankers, manufacturers, brokers, agents, etc.) Current accounts and interest. Operations of change, public funds.

III. GEOGRAPHY.

Physical geography of the five continents.

IV. MATHEMATICS.

(*a*) Arithmetic.

Elementary arithmetic in its applications to commerce.

(*b*) Algebra.

Algebraic notation. Equations of the first degree with one and several unknown quantities. Equations of the second degree with one unknown quantity. Problems and discussion of the solutions.

(*c*) Geometry.

Plane geometry.

V. ELEMENTARY NOTIONS OF PHYSICS AND CHEMISTRY.

(*a*) Physics.

Fundamental notions. General properties of bodies. Gravity. Hydrostatics. Specific weights. Gases. Principles of acoustics, heat, light, magnetism and electricity.

(*b*) Chemistry.

(Inorganic Chemistry.)

Fundamental notions. Chemical nomenclature. Atomic theory. Symbols and Formulas. Law of proportions. Law of multiple proportions. Problems of application. Combinations. Decompositions. Reactions. Berthollet's law. Dissolution. Crystallization, radical theory of types. Metalloids and their compounds. Principal metals and their compounds. General characters of oxides, sulphides, chlorides, bromides, iodides, fluorides.

(Organic Chemistry.)

Fundamental notions of organic chemistry.

VI. GENERAL HISTORY.

VII. COMMERCIAL LAW.

Contracts, essential conditions and principal forms of contracts. Merchants, commissioners, brokers. Bills of exchange and shipping, invoices. Commercial companies, bankruptcies.

VIII. POLITICAL ECONOMY.

General notions as discussed in the treatises of Garnier and Lavelaye.

This preparatory course is given by professors in the institute and assistant instructors. It lasts from the fifteenth of April or the first of May to the tenth of August. It may be extended in cases of necessity. The hours are distributed as follows:

French, three hours a week; German, three hours; English, two hours; History, three hours; Geography, three hours; Bookkeeping, three hours; Arithmetic, three hours; Algebra, two hours; Geometry, two hours; Physics, two hours; Chemistry, two hours; Law, two hours; Political Economy, one hour.

The entrance examinations for the first year are both oral and written upon the subjects indicated above. The written examination precedes the oral. All candidates are examined in the written work at the same time. The written examination is six hours in length. The oral examination lasts at least one-half hour for each candidate.

The course of the first year is not very different from that in the two French schools discussed in this report and need not therefore be repeated here.

Practical Part. Commercial Bureau (First Year).

The different theoretical courses of the first year all converge toward the Commercial Bureau, which embraces the application of mathematics and the practical exercises in commerce and industry, and covers both years. In the first year the pupils are trained in the practice of calculating invoices; in banking and exchange operations; in current accounts; in exchange; in sales accounts; in arbitrage, etc. Including, therefore, the making out of bills of exchange, bills of lading, etc. Each commercial document placed under the eye of the pupil is an object of explanations, or of references to the explanations given in the theoretical course.

Finally, the regular operations of a business house are taken up; the work being the same for each pupil. Each of them must perform all the functions in turn, keep books and carry on a correspondence relating to the operations of the house, first in French and in the latter part of the year in other languages. The operations of this fictitious business house are given to the pupil, who keeps a complete account of the fluctuations of price in the various markets. Each month the business of the house is closed up, and on the thirty-first of May an inventory is made and books are opened anew in such a way that each pupil goes through the entire round of operations and correspondence.

In the first year business is limited to Europe, but it comprises commission business, banking, independent business, partnership or agency, consignments, shipments, etc. Industrial and corporate accounting is also taught in the points where they are different from commercial and banking accounting.

* * * *

The course of the second year corresponds to the second year's course in the French schools and need not be repeated here.

Practical Part. Commercial Bureau (Second Year).

In this bureau the plan changes in the second year. The pupil who has been trained in the preceding year to perform in the order of time all the operations which can be quickly conducted in Europe, is now trained to follow the operations extending over a long period from the transmission of the order to the final execution, passing through all the intermediate phases; to follow the business into any market whatever; to make all the calculations and carry on all the correspondence, and to handle all the writings in the order of combinations and time. The general course of the operations is indicated to the pupil with the special conditions, which is then left to him to execute to the best of his ability under the eye of the professor. These fictitious operations based upon real operations drawn from the practice of the great business houses, are carried on with the leading commercial places on the globe. The pupil follows them easily and with interest, for they are not very numerous. He keeps the various accounts in the weights, measures and moneys of the different countries.

He carries on correspondence in different languages. In these practical exercises is found an excellent opportunity for the application of the knowledge acquired in the bureau in the first year, as well as in the different theoretical courses. This method is evidently well adapted to train merchants capable of comprehending large business transactions, of combining them and of executing them in all their parts.

It is worth noticing that it is the Institute at Antwerp which first adopted the system of a series of business houses or offices through which the students successively passed. Introduced at Mühlhausen by Dr. Penot, this system, which presents certain advantages, has not succeeded at the school of Lyons. It is still in force in the schools at Marseilles, Bordeaux and Havre.

The reasons which have led the Institute of Antwerp to reject it are:

First—That pupils in this way do only a part of the work.

Second—That operations with various places are limited, because it is impossible to modify the divisions of the office constantly.

Third—That pupils occupy toward one another in turn inferior positions, which are not always accepted with pleasure.

Fourth—That it is necessary in order to apply that system perfectly either to have assistants in the bureau sufficiently numerous to supervise almost all the operations of each office, or pupil teachers to be placed at the head of the offices and capable of executing the orders of the chief of the bureau.

One has then judged it preferable to make each pupil go through all the parts of the operations by putting him by turns into the places where each operation is carried on. Thus we have returned to the method followed since 1820 in the Superior School of Commerce of Paris, which also, while under the direction of Blanqui, attempted the division of the Commercial Bureau into separate commercial houses and which gave up this plan after some years.

WEEKLY DIVISION OF THE TIME.

SUBJECTS.	First Year.	Second Year.
Commercial Bureau	12	12
Commercial Arithmetic	3	3
History of Commercial Products and Commercial Chemistry	2	3
Political Economy and Statistics	1	2
General History of Commerce	2	—
Commercial and Industrial Geography	1	3
Commercial and Maritime Law.—Principles of International Law	2	—
General Principles of Law	—	1
Tariff Legislation	1	—
Maritime Construction and Equipment	1	—
Dutch	2	2
German	3	3
English	3	3
Spanish or Italian	3	3
Total number of hours	36	35
Daily distribution of hours.		
Courses, properly so-called	3	3
Commercial Bureau (five days in a week)	3	3

The pupils must be present at the institute at eight o'clock in the morning. Besides an interval of ten minutes at ten o'clock, they are

allowed two hours for lunch, which they may take at home, thus dividing the day into two sections of four and two hours respectively: from eight o'clock until noon, and from two to four in the afternoon.

Observations on the Instruction in the Institute.—The curriculum of the Institute at Antwerp, whose first program was proposed by M. H. Matthyssen and whose first organization in 1853 was effected by M. J. B. Fontaine, has enjoyed a reputation for a long time, which the improvements in its work, notably under the direction of M. Grandgaignage, fully justify. This able director, aided by the practical advice of his Council of Administration and his instructing body, as well as by the Alumni Association, has constantly endeavored since his appointment in 1876 to develop and improve the program of the institute, and to strengthen the studies by permanent examinations, which we shall mention later.

The courses in language have been specially strengthened, as well as those in commercial arithmetic and banking, which were at first included in the instruction of the Commercial Bureau, but which are now made the object of a separate course. The courses in naval equipment and construction have been made more practical; the course in commercial products which cannot usefully be extended to all materials, has been limited to the most important commodities and products, to those which support the principal markets of the world; the course in commercial geography—which has recently been introduced into Belgian universities—has been based more and more at this institute upon the consular reports, and upon the statistical facts included in their tables; the course in the history of commerce and industry, without abandoning entirely the field of ancient history, has been more and more extended in the modern field. In this way the material of each course has been increased and strengthened to the great advantage of the various courses, and the practical results which are expected.

Let us add that the students of the Institute at Antwerp have had information of every sort placed at their disposal by the government: commercial and financial journals, economic reviews, bulletins, circulars of business houses, etc. These publications furnish material relating to the business usage of different places, the movement of business, its nature and mechanism. The students have, moreover, at their disposition a library of four thousand volumes, among which are to be found the principal works relating to commercial and economic science, to law, to the physical and natural sciences, to travel, to history, to literature, etc.

Besides the regular courses, conferences, organized by the director, are held by practical men, merchants, brokers, manufacturers, engineers, etc., upon the various questions relating to the subjects of instruction. We should also mention the industrial visits which are made each year during the vacations, under the conduct of the director or of the professors, to the principal business establishments of the country, in order to enable the pupils to receive at the very centres of manufacturing, and from the most competent men, full explanations as to the qualities of the various raw materials, the uses made of them, their transformations, the products manufactured from them, the country of destination, mode of packing, shipping, etc.

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It will be noticed that the program of the Institute at Antwerp does not comprise courses in elocution and stenography, which are to be found in the instruction of many of the French schools. The merchant should early learn how to express himself in public, and to take rapid notes on the remarks of others. At the school of Marseilles, in particular, the debates of the pupils have given the best results.

But the difficulty of expressing one's self does not always come from a lack of self-possession and skill, but is ordinarily caused by insufficient primary instruction. At the Institute at Antwerp, as in our French commercial schools, the defects of the fundamental training interfere with the homogeneity of the studies. The technical instruction is based upon a general education which is too often insufficient. This defect shows itself to the examiners in the extreme difficulty with which certain pupils present their ideas, in their embarrassed definitions, and in the feebleness of their style. We find here an additional reason for insisting upon the preparatory year, and requiring every pupil to take it whose entrance examination is not entirely satisfactory.

It would also, without doubt, be well to add a third year to the regular course; to organize a higher course in French and to strengthen the instruction in other foreign languages. This third year, during which the courses in law, legislation and procedure could be more fully developed, would prepare the pupils for the consular career, which is frequently recruited in Belgium from the ranks of merchants.

CHAPTER IV.

EXAMINATIONS.

General Examinations.—Regular pupils must pass three general examinations. The first at admission; the second at passing from the first to the second year; and the third at the close of the second year. The board of this last examination confers a diploma of capacity, giving the title of "Licentiates in the Commercial Sciences." This board, composed of seven members named by the Minister of Agriculture and Industry, is chosen from among the members of the Administrative Commission, from merchants of the place, and from the professors of the institute. The government is represented in this board by the Inspector General of Industry. The board of the entrance examination and of the examination at the close of the first year, is formed of the professors of the institute, under the presidency of the director. These examinations are partly oral and partly written. The written examination is held at the same time for all the pupils; the questions for the written examinations are drawn by lot by the various candidates. The oral examination is public; it follows an order of priority determined by lot for three candidates at one time. The subjects of this examination are those of the instruction in the professional sections of the athenæums, colleges and gymnasiums, and in the preparatory course of the institute.

Below is given the value assigned to the different subjects:

ENTRANCE EXAMINATION.	Written.	Oral.
French Composition	10	—
Translation into English	5	—
Translation into German	5	—
Arithmetic with its Application to Commerce	10	—
Bookkeeping	10	—
Physical Geography	10	—
General History	10	—
Commercial Law	10	—
Political Economy	10	—
Algebra	—	20
Physics and Chemistry	—	20
	80	40

Total, 120 points,

of which the candidate must obtain at least three-fifths or 72 points.

EXAMINATION AT THE CLOSE OF FIRST YEAR.	Written.	Oral.
Business	10	10
Commercial Arithmetic	5	5
Commercial and Industrial Geography	10	10
Political Economy	10	10
General Principles of Law	5	5
Commercial Products	10	10
French	5	5
Flemish	5	5
English	5	5
German	5	5
Italian or Spanish	5	5
	75	75

Total, 150 points,

of which the candidate must obtain three-fifths or 90 points.

FINAL EXAMINATION.	Written.	Oral.
Business	10	10
Commercial Arithmetic	5	5
Commercial and Industrial Geography	10	10
Political Economy and Statistics	10	10
Commercial and Industrial Law	10	—
Commercial and Maritime Law	10	10
International Law	5	—
Tariff Legislation	5	5
Commercial Products	10	10
Naval Construction and Equipment	10	—
French	10	5
Flemish	10	5
English	10	5
German	10	5
Spanish or Italian	10	5
A report upon the commercial and industrial situation of a country to be determined by lot among three countries, set at least fifteen days before the examination. Four hours is given for the writing of this report, which counts	40	—
	175	85

Total 260 points,

of which the candidate must obtain three-fifths or 156 points.

ENROLLMENTS FOR THE EXAMINATIONS.

	Entrance.		First Year.		Final.	
	Enrolled.	Admitted.	Enrolled.	Admitted.	Enrolled.	Admitted.
From 1853 to 1877 . . .	894	642	437	330	223	176
" 1877 to 1885 . . .	349	298	243	202	168	141
	1243	940	680	532	391	317

Partial Examinations.—Since 1877 the pupils have also been required to pass partial examinations, written or oral, in order to determine their standing during the year. This mark and that of the following examination are added together giving the final mark. It is thought at Antwerp as in our own schools that one should judge the student not by a single test, but by the work of the whole year, as in this way better results are obtained. The results of the examination at the close of the first year and of the final examination are published in the journals.

CHAPTER V.

REWARDS; DISCIPLINARY MEANS.

Diploma.—The students of the second year who have passed with success the final examination obtain a diploma of capacity, giving them the title, since 1873, of Licentiates in the Commercial Sciences. The diploma certifies that the course of the student has been eminently satisfactory if he has obtained from 156 to 175 points out of a total of 260; with distinction from 176 to 200; with great distinction from 201 to 230 points; and with the highest distinction from 231 to 260 points.

From 1878 to 1885 the number of students who entered the final examination was 168. Of this number 141 received the diploma—77 marked satisfactory; 42 distinguished; 18 highly distinguished; and 4 the highest distinction.

Observations.—The title of Licentiates in the Commercial Sciences, used now for ten years in the diploma of the institute, has contributed to raise its value. In the electoral law of 1883 the diploma of the Institute of Antwerp was put upon the same footing as a university diploma. This measure, well calculated to encourage students to present themselves for the entrance examination, has already led to a marked increase in the attendance at the institute. Another measure, not less favorable to its increase, was the organization, in 1880, of the intermediate instruction in the athenæums of the small towns, and the encouragement given by the government to those students who pursued their intermediate studies up to the first year. Thus the students of the athenæums, entering the Institute of Antwerp, received prizes of from 300 to 600 francs. One has attained in this way the double result of increasing the attendance at the higher courses in the athenæums, and of favoring the better preparation of the students for the institute. This is another evidence of the necessity of government patronage for commercial schools. The Belgian government would not have favored the Institute of Antwerp in this way if it had been a private institution. The Belgian government belongs, moreover, in the

very first rank of the European governments which have assisted in the development of commercial instruction.

Traveling Scholarships.—The students to whom the diploma of the grade of high distinction has been given may obtain a traveling scholarship upon the request of the Administrative Commission of the institute. An annual grant of 45,000 francs was inserted into the Belgian government budget by an order of the nineteenth of February, 1862; an excellent measure which the French government have just decided to take. These scholarships, destined to encourage young men who desire to complete their commercial knowledge by residing outside of Europe, vary in value from 5000 to 6000 francs, according to the countries chosen. They are assigned for three years. The number of scholars was very small at first, since the Belgians care to go abroad as little as the French do. However, thanks to the laudable efforts of the faculty of the institute, twenty-five graduates have requested and obtained these traveling scholarships within the last ten years, and have gone to Argentine Republic, Brazil, United States, Canada, Mexico, China, Japan, India, Australia, New Zealand, etc. They have founded Belgian business houses in these places, and opened up markets of a certain importance to Belgian products. Some have returned to establish themselves as merchants in their own country, and to profit by the relations which they had established. Finally, several of these scholars hold, or have held, the post of consul or vice-consul of Belgium at Calcutta, Sidney, Melbourne, Buenos-Ayres, etc. Two former pupils of the institute have occupied for several years the post of assistants in the English administration of the Chinese tariffs.

All these scholarship holders have then contributed to develop the commerce of the mother country in a manner much more useful and productive than they would have done if they had not gone abroad. To-day public attention having been aroused and emulation excited, these scholarships are in demand by the students. On the first of January last seven graduates had applied for them, and in 1886 there were seven holders of these scholarships, of whom three are in Australia, two in Mexico and two in the Cape Colony.

The certificate of the consul is required of the pupil to show that he is occupying himself with commercial affairs. Before his departure the student must engage in practical work in Europe, but at his own cost. This is a guarantee and a great inconvenience. It is certain that the pupil upon leaving the institute is not sufficiently prepared to perform properly all sides of his mission, he lacks experience. On the contrary, when he has had some business experience the situation is changed, he has been face to face with actual realities; he has observed and reflected; he has met certain difficulties of business life; he is prepared to profit to the fullest extent both on his own account and that of his country from the connections which he may know how to establish, thanks to the liberality of the study, a liberality which allows him to complete his practical instruction in practical life, without having to divert his attention by the necessity of earning his living. But will not this very business experience too often hinder the travel which one wishes to favor? If the pupil finds a good position he grows into it fearing to lose a certainty for an uncertainty. It will be seen that the question merits careful examination, and one cannot favor either view absolutely.

The holders of these scholarships are required to send a report to the Minister of Foreign Affairs at the end of the first year's study in the country which they have chosen. These reports are ordinarily very well made; some of them have been worth publishing in whole or in part in the consular reports.

Discipline.—The pupils of the institute being on an average of from eighteen to twenty years of age cannot be subjected to the ordinary rules of the athenæums and colleges.

The rules of order of the institute are limited, therefore, to the mere regulation of the succession of the courses and exercises, and generally speaking they are very mild. Fifteen unexcused absences incur a reprimand, which can, it is true, exercise an unfavorable influence upon the examinations. The rules also require that the note books of the pupils shall be submitted to the Board of Examiners, and may be considered in assigning the final grade. The pupils must pursue all the exercises required in the Commercial Bureau, as well as in the other courses. They are admitted to the examination only after showing a certificate from the head of the bureau that their books have been regularly kept up to the close of the operations of the year. Any acts of insubordination tending to disturb the order of the school, either within or without the exercises, incur temporary suspension.

CHAPTER VI.

ADMINISTRATION; RECEIPTS; EXPENSES.

The institute is governed by a commission composed of the mayor of Antwerp, as president, of the director and of several other members. Three of these members are named by the Minister of the Interior, and three by the Common Council for a term of three years. The mayor of the city of Antwerp is president *ex officio* of this commission, over which he always presides, unless the governor of the province should be present at the session. This commission, one-third of which is thus renewed every year, lays before the Minister of the Interior its proposals relating to the appointment of the director; it supervises the execution of the rules of the institute, controls the course of study, and makes at the end of each year a report to the Minister of the Interior upon the discipline and management of the establishment.

Council of Improvement.—This council is composed of the professors, under the presidency of the director. It concerns itself with measures relating to the instruction of the school, and makes recommendations upon this subject to the administrative commission, which annually appoints two of its members to be present at the sessions of this council.

Inspection.—The government appoints a person to inspect the institute in order to keep track of the course of its work, and the manner in which the program is carried out. This function was entrusted in 1862 to the Inspector General of Industry, M. J. Kindt, who was a member of the final examination board which conferred the title of Licentiates of the Commercial and Industrial Sciences to those securing a diploma.

Budget:

RECEIPTS.

	Francs.
Government subsidy	45,000
City subsidy	15,000
Probable income from matriculations	20,000
	80,000

EXPENSES.

	Francs.
Salaries	51,000
Museum and library	3,000
Heating and lighting	2,000
Expenses of Commercial Bureau	2,000
Examination expenses	2,000
Division of matriculation fees	20,000
	80,000

The sum received from the matriculations is divided among the instructors of the institute by way of supplementing their salaries. The professors in the institute are, moreover, entitled to a pension upon retirement.

CHAPTER VII.

PERSONNEL.

The faculty of the Superior Institute of Commerce of Antwerp is composed of thirteen professors and two assistants.

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CHAPTER VIII.

GENERAL CONSIDERATIONS.—CONCLUSION.

Although it has rendered great services and has existed for more than thirty years, the institute at Antwerp has not been as yet fully accepted in Belgium, even in the commercial world. This ought not to surprise us, for the same thing is true of France in regard to its commercial schools of commerce. It is with the Belgians as with the French—commercial instruction must contend with the prejudices and with the contempt of the classical schools. "Of what use is it," says one, "to train shopkeepers?"

This contempt, which belongs as would appear to good tone, has found in Belgium, as in France, an echo even among the shopkeepers themselves, seduced by the beauties of classical instruction to which they have given their most intelligent boys. "Of what use," say they, "is commercial instruction?" "Did we learn commerce at school? Practice has made us what we are; practice alone can do it."

In 1867, fourteen years after its establishment, the institute at Antwerp had only sixty-six pupils, of whom thirty-five were foreigners, which shows that its reputation, already well merited, was better established abroad than in Belgium itself. It is notable that since the active impression made upon the work of the school by the chief of the commercial bureau, M. Grandgaignage, who became director of the institute in 1878,

the number of regular students has steadily increased. The statistical table, previously given, shows that in the period from 1852 to 1869 there were 1116 pupils, an average of 68 per year; while from 1870 to 1886 there were 2181 pupils, an average of 128. We have already explained that the reduction of the matriculation fee at the institute has contributed largely to this result, as well as the provisions established by the Belgian government in favor of the diploma of the institute, which was assimilated to the licentiates and placed, under the electoral law of 1883, upon a footing of equality with the university diplomas.

To-day prominent people connected with commerce send their children to this institute. Many persons might be mentioned; among those a former minister; the mayor of Antwerp; many members of the Legislature, etc. A few more years and its success will be undoubted. The growth of the institute at Antwerp has been comparatively slow, when we consider that it has enjoyed from the beginning the moral and financial support of the State, the latter having granted a subsidy of 90,000 francs a year since 1862, a sum far exceeding that which was granted to similar education in France.

Belgium contains 5,500,000 inhabitants. The commercial and industrial element is the dominating one, and it is, therefore, a cause of astonishment that it sends annually only about eighty students to the only establishment of higher commercial instruction in the country.

CHAPTER IX.

THE ALUMNI ASSOCIATION OF THE SUPERIOR INSTITUTE OF COMMERCE IN ANTWERP.

Foundation of the Association.—On the third of May, 1873, M. Strauss, a Belgian consul and a former student of the institute, invited his fellow alumni to establish a fraternal and international union of the former students of the Superior Institute. He set forth the scheme in a very interesting discourse, some passages of which are well worth quoting:

"In life," he said, "one is not often fortunate enough to run across former school fellows. This reason would be sufficient to justify the utility of the society which I propose to establish.

"We live in an age of progress, which imposes upon man the duty of educating himself, and which recognizes the influence of commerce and industry upon the development of national prosperity, and the welfare of all. One no longer judges the power of a nation by the number of soldiers which it can put into the field, but by the perfection of its industrial equipment and by its productive and commercial power. Wherever there is no foreign commerce there can be no great system of industry, and without a developed industry there can be no great roads of communication, no rapid and economic methods of transportation, little agriculture, and as a consequence of all this there must be general poverty.

"The men of 1879 understood this fully when they abolished the different castes of society. They no longer wished that the merchant who devotes his whole activity to society, should be in a social

position inferior to that of the noble who was ashamed to occupy himself with the material welfare of the people, and whose titles and wealth were, at that time, too often the result of war, official assassination, theft and authorized robbery. The titled aristocracy which had sprung from brute force had to be destroyed by brute force.

"After the French Revolution the position of the merchant and manufacturer became more honorable, but, unfortunately, education and instruction did not advance with liberty, and for half a century there were influential shopkeepers, and but few or no true merchants.

"This unfavorable situation gave Europe and America a financial aristocracy more injurious and more arrogant, if possible, than the hereditary nobility of former times. Ignorant rich men imposed their ideas upon society; they believed, as they still believe to-day, that their wealth permitted them to treat all economic questions, and to determine the legislation which was necessary to develop foreign relations. Napoleon the great—a destroyer who produced nothing—Napoleon, who had re-established aristocracy, granted all privileges to these wealthy people, who believed that commerce consists only in buying and selling merchandise. The fault of Napoleon has by no means been repaired. Even to-day we still possess a caste of notable merchants in whose ranks one takes account of wealth, and disregards intelligence and education.

"However, progress and modern inventions were not slow to demonstrate the utility of commercial instruction. Thanks to the facility of connections, to the increase of production, and to the mutual dependence of nations, the science of commerce became more and more complex. Some clear-sighted men recognized that business practice was sufficient for the clerk, but that the merchant, the manager, should make careful studies, including the elements of law, political economy, history, commercial geography, raw and manufactured products, statistics, tariff legislation, foreign languages, etc. It was Antwerp which first had the honor of establishing a commercial university, but the citizens of Antwerp, and, indeed, the Belgians in general, did not know how to profit by this advantage, and it is the foreigners who have supported this institution up to the present. Our merchants, who, for the most part, carry on the commission business, in spite of the large capital at their disposal, do not believe in the necessity of a solid theoretical instruction. They forget that routine leaves us stationary, while our neighbors are making rapid progress; they forget that commerce is becoming more and more general, and that to attain success one must keep up with the procession. To these men the honor of the profession would appear to be an idle expression; the office is sufficient to give the practice and chance will do the rest.

"These ideas, gentlemen, we must combat. Upon us rests the duty of demonstrating the utility of higher studies, and to strengthen the reputation of the institute. The task is difficult, I know, but we must strive to perform it. The end to be reached is a laudable one. We must develop the taste for such studies, and do our part toward educating the present generation, so that later we may assist each other, and derive the greatest possible benefit from the beautiful situation of Antwerp.

"Our commercial policy has remained on the same level as the education of our mercantile classes, that is to say a very low one. Education alone can raise it to the height of our epoch of progress, and in this, gentlemen, we need the aid of the government. In other careers a certificate of graduation gives a direct advantage to him who holds it. To become a lawyer, a judge, a physician, a notary, etc., one must have passed an examination. For all engineering work the State engages only qualified engineers. Why, then, should one not confer substantial advantages upon the diploma of this institution? Why can one not give to intelligence and instruction the same relative advantage in all superior and honorary commercial positions. This question was raised ten or fifteen years ago. At that time a reform of our tribunals and chambers of commerce were demanded; our consular magistrates were reproached with their ignorance of law, and one demanded educated judges joining to the practice of business the necessary theoretical knowledge.

"In 1857 His Excellency, Viscount Vilain XIV., then Minister of Foreign Affairs, addressed to the king a report upon the consulates. He said that for the salaried positions it was necessary to obtain educated candidates, who had passed a suitable examination. 'The Superior Institute of Commerce,' said the minister, 'would form in time a most excellent training school.'

"Gentlemen, we have not followed the suggestions of this report, which was approved and served as the basis of a royal ordinance of 1857. Our consular body still continues to be recruited right and left, without demanding of the candidates any diploma or any preliminary preparation whatever. Favoritism alone has ruled, and rules still, this career. It is our duty to work for the time when our salaried consulships shall be reserved to the graduates of the institute, so that in the positions of the tribunals and chambers of commerce more attention shall be given to education than to wealth. We must prevent the government from continuing a policy condemned by economic laws, as it has been influenced and counselled by a few rich men to do.

"You should name, gentlemen, a committee who would be charged with studying the questions of the day, and to take necessary steps to protect the financial and industrial interests of our country. In the beginning we may have but little influence, but in the long run, with patience and perseverance we shall triumph."

The institution thus established counted on the seventeenth of August forty members, and proceeded to adopt a set of statutes, which indicate in the following manner the purposes of the association:

First, to establish among the members regular and intimate relations.

Second, to encourage on their part commercial enterprises.

Third, to develop a taste for commercial studies; and, finally, to encourage the pupils of the institute in their studies by putting at their disposition documents and books treating of commercial questions.

Fourth, to establish scholarships in the Superior Institute of Commerce, in favor of young men in indigent circumstances, who have passed good intermediate examinations.

Fifth, to study the commercial questions of current interest.

Sixth, to defend the rights which are granted, or may be granted to the diploma.

Work of the Association.—From the first year of its existence the association was occupied with a study of the questions of the rights which were accorded or were to be accorded to the diploma. In 1876 the government decided to attach a title to these documents, and instituted the grade of Licentiate in the Commercial Sciences. This was the first step, but the questions of the privileges belonging to it remain in abeyance even yet. On various occasions the association has supported the candidacy of its members for consular positions, and has had the satisfaction of seeing them appointed. Experience has demonstrated that the best Belgian consuls are those who have completed their studies at the Superior Institute of Commerce. The licentiates in the commercial sciences are indeed the only educated candidates under existing circumstances. But with the growing difficulties of modern commerce a more practical organization of the consular service must be made, and consuls must receive an education appropriate to the career. This question, of a truly national importance, has led the association to publish various reports upon the necessity of a consular school, annexed to the Superior School of Commerce at Antwerp. It is proposed to establish a third year, where the licentiate in the commercial sciences may prepare himself for the diploma of consular cadet.

In 1877, on occasion of the twenty-fifth anniversary of the creation of the institute, a meeting of the alumni discussed this question for a long time, as also that of the reorganization of certain courses. The general improvement of commercial instruction in all its details has been the principal object of the association itself.

Economic questions have also been the object of numerous discussions and various reports. The Alumni Association of the Superior Institute of Commerce obtains all the government documents issued by the various ministries, and it is frequently asked for its advice by the government upon commercial and maritime questions.

It is among the alumni of the institute that the most active members of the new League for Commercial Liberty are to be found; it became necessary to take up this question and to interest the masses in it. The association has sent petitions to the chamber of representatives upon the monetary question, and in the establishment of laws protecting the importation of food it has energetically defended the principles of free exchange.

The association has affiliations with the federation of the Chambers of Commerce and various commercial and industrial societies. Its secretary has been chosen on different occasions as assistant secretary of the federation. It discusses regularly the great questions of general interest which are from time to time the order of the day. In its sessions the delegates of the association have defended true economic principles. It has also been represented in national and international congresses.

At the international congress of Commercial Geography, held in Brussels in 1879, at the congress of Industry and Commerce, held in Brussels in 1880 and at Liège in 1881; at the international congress of Education at Brussels in 1882, its delegates took an active part. They introduced various motions and secured action favorable to the views of the association.

From the beginning the association has established scholarships, and to-day, as a consequence of its efforts, most of the committees grant scholarships to young men who demand them. The aid granted by the

association has been given with a view of facilitating the studies of foreigners at the institute, and of aiding Belgian youths to defray the cost of living and the purchase of books.

Statistics.—In 1873 the number of members of this association was 40, it arose to 53 in 1874–75, 56 in 1875–76, 60 in 1876–77, 76 in 1877–78, 80 in 1878–79, 102 in 1879–80, 127 in 1880–81, 143 in 1881–82, 154 in 1882–83, 158 in 1883–84, 180 in 1884–85.

Administration.—The Council of Administration of the association is composed of a president, two vice-presidents, two secretaries, a treasurer, a librarian and two councillors.

Social and Economic Reports.—In 1880 it was decided to give to members of the association residing abroad the title of corresponding members and to publish a review of the reports which they might furnish. The colleagues residing in Belgium assist in preparing this review, whose success is established by four years' successful work.

Below is given a list of the articles appearing in this review for the fourth year, in which many questions are carefully examined and well discussed:

1st. Portuguese Colonies.
2d. Statistical Tables of Queensland in 1882.
3d. Some Words upon the Situation of the Condition of Naval Construction in England.
4th. Miscellaneous Reports upon Porto Rico, United States and the Rhine.
5th. Chronicle of the Association.
6th. Commercial Instruction.
7th. Future of the Commerce of Tong-King.
8th. Commerce of the United States for the years 1883–84.
9th. Portuguese Colonies.
10th. Buenos Ayres.
11th. The Commercial Movement of Havre in 1883.
12th. The Political Crisis in the Sugar Question.
13th. The Sufferings of the Agriculturists.
14th. Argentine Republic.
15th. Commercial Instruction.
16th. Some Observations upon the Sugar Question.
17th. Petroleum Region of the Caucasus.
18th. Industrial Chronicle.
19th. Customs Duties on Food Supplies.
20th. Study upon the Exportation of Ostriches.
21st. Commercial Instruction.
22d. Chicago.
23d. Buenos Ayres.
24th. The Agricultural Question.
25th. Some Consideration on the Wheat Product of India.
26th. Commercial Instruction.
27th. The Port of Amsterdam.
28th. Commercial Needs.
29th. Division of Africa.

E.

HIGHER COMMERCIAL INSTRUCTION IN ITALY.

SUPERIOR SCHOOL OF COMMERCE AT VENICE.

(La Regia Scuola Superiore di Commercio in Venezia.)

The law reorganizing public instruction in Italy dates from the month of November, 1859, and divided instruction into two departments. The pupils after having received the directions and instruction of the first degree and of the second degree, if they aspire to liberal careers, pass five years in the gymnasia and three years in the lycées, from which they graduate with a diploma of Lyceum Licentiate, which admits to the higher instruction of the universities. Those who intend to enter commerce, industry, agriculture and the so-called technical professions enter the technical schools.*

The pupils who desire to complete their technical instruction after finishing the technical schools enter the technical institutes, which give to the pupils of the commercial section a diploma of accounting, giving access to the banks and to certain government positions. But from the point of view of commercial instruction these establishments of secondary education do not respond entirely to the wants of our epoch, and owing to the development given to industry necessitating the extension of commercial operations, Italy, like other nations, has felt the need of establishing a higher industrial and commercial education.

In 1862 the Italian Industrial Museum was established at Turin to provide for technical instruction and the progress of the arts and of commerce. It was at once a polytechnic school, where instruction was given in the physical and natural sciences, and a normal school for all the branches of technical instruction. At Milan a Superior Technical Institute was established as a sort of graduate school for engineers; at Naples a school of application for engineers; at Florence a superior institute for philological and philosophical studies, and at Genoa a naval normal school.

There was still lacking, in order to complete this list, a superior school of commerce similar to that at Antwerp and at Mühlhausen. Venice was, in a certain sense, set apart by its ancient commercial prosperity to take the initiative in this work. In July, 1867, the Directing Council of the Technical and Industrial Institute and of the Mercantile Marine presented to the Provincial Council of Venice a request for a subsidy. The promoters of this project were MM. Louis Luzzati and Ed. Déodati.

The Provincial Council of Venice looked upon this proposition with favor and obtained the aid of the city and province and chambers of commerce of Venice. These different bodies, recognizing that such a school was needed, granted subsidies and named a Committee of Organization composed of ten members.

The government granted its aid also, gave a subsidy, and sanctioned the foundation of the school, giving it the triple character of

First—A superior institute of commerce for those young people who wished to perfect themselves in commercial studies;

Second—A law faculty for those candidates looking forward to the consular career;

* Compare Léautey, Écoles de Commerce, p. 638.

Third—A normal school to prepare teachers to instruct in commercial science and in foreign languages in the technical institutes and other technical schools.

The school was to be governed by a Directing Council composed of two representatives from each of the three co-operating bodies and of the director of the school. But for the first years the direction was confided to a Committee of Organization.

The city of Venice granted as a location the magnificent Foscari palace, and the school was opened in 1868 under the most happy auspices. The attendance was very satisfactory from the beginning as the following statistics show: 1869, 112; 1870, 136; 1871, 103; 1872, 97; 1873, 72; 1874, 72; 1875, 71; 1876, 76; 1877, 75; 1878, 92; 1879, 135; 1880, 130; 1881, 126; 1882, 132; 1883, 135; 1884, 110; 1885, 102; 1886, 109.

During the scholastic years 1868–69 and 1869–70, the number of pupils increased from 112 to 135, because at that time there existed a preparatory course which enrolled 77 pupils in 1869 and 41 in 1870. This preparatory course was then abolished. The Royal Superior School of Commerce at Venice had 1884 pupils in the eighteen years of its existence from 1869 to 1886, an average of 104; the average since 1879 being 122. These figures are eloquent, and do all honor to the professors of the school and their able director, Senator Francois Ferrara. However, the school has not yet arrived at the zenith of its prosperity. This great establishment ought to have a minimum of 200 students in its three departments.

CHAPTER II.

SUBSIDIES; GOVERNMENT OF THE SCHOOL; SCHOLARSHIPS.

The Superior School of Commerce at Venice receives the following subsidies:

First.—From the Province of Venice	40,000 francs.
Second.—From the City of Venice	10,000 "
Third.—From the Chamber of Commerce	5,000 "
Fourth.—From the State	25,000 "

Up to 1872 the last subsidy amounted to only 10,000 francs a year. The school has received numerous gifts and legacies. The city grants the use of the Palace Foscari.

The school admits regular students and special students for particular courses. The latter class may be admitted, after an entrance examination, to the standing of regular pupils. Up to 1870 there existed at this school a preparatory course of one year, but its attendance grew so rapidly at the expense of the Technical Institutes that it was abolished, which was a wrong step in our opinion.

Candidates provided with a certificate of the Technical Institute, or of an equivalent foreign school, are exempted from the entrance examination, which covers Italian language and literature, geography, history, arithmetic, algebra, physics, natural history, French language, accounting and penmanship.

One may be admitted directly to the second year on condition of having completed his seventeenth year and passed an examination upon the subjects of the first year. The tuition fee is 100 francs per year for each course. Students pay besides a matriculation fee of 25 francs. The special students pay 15 francs per course and per year for the first year, and 10 francs for each succeeding year.

The government grants subsidies and scholarships to the students who distinguish themselves by their industry and success. The provinces and the chambers of commerce of the cities which send young men to the school at Venice also grant numerous scholarships.

CHAPTER III.

INSTRUCTION; DIVISION OF STUDIES; PROGRAM.

The Superior School of Commerce at Venice is divided into three sections, in each of which a regular curriculum is pursued.

The first section prepares young men for the commercial professions and trains them for commercial life with success and profit. It is called the Commercial Section and its curriculum is three years in length.

The second section trains young men for the ministry of foreign affairs and prepares them for the consular careers. It is known as the Law Section and its course covers five years.

The third section, called the Normal Section, is intended to prepare teachers for commercial schools. It is divided into four classes:

First—An administrative class—the study of political economy and statistics.

Second—A class in accounting.

Third—A class for the study of raw materials and commercial products.

Fourth—A class in foreign languages.

The courses of the first and fourth classes are five years in length; those of the second and third are only four. The courses of the first year are common to all the pupils, with the exception of those who are preparing for the normal classes in foreign languages, as this last section is completely distinct from the others; the pupils who compose it follow special courses. At the beginning of the second year the pupils who do not take part in the special course of languages must choose between the commercial, the consular and the normal section. Those who desire to enter the last section must then declare for what special branch of commercial instruction they wish to prepare themselves, and according to their choice they are divided into the classes of administration, accounting and the study of commercial products.

THE GENERAL PROGRAMS OF THE COURSES.

Course of the First Year.

Section for all the pupils.	*Normal section of languages.*
Italian Literature.	Italian literature.
Commercial Geography.	French language. }
Accounting.	English language. } At the choice of the pupil.
Algebra.	German language. }
French language.	
German language.	
Introduction into the study of commercial products.	
Institutions of commerce.	
Notions of civil law.	
English language.	
Penmanship.	

Course of the Second Year.

Commercial Section.	Consular Section.	Normal Section.			
		Administration.	Study of Commercial Products.	Accounting.	Languages.
Italian literature	Id.	Id.	Id.	Id.	Id.
Commercial geography	Id.	Id.	Id.	. . .	. . . . .
Accounting	. . . . .	. . .	. . .	Id.	. . . . .
Commercial and Industrial Arithmetic	Id.	. . .	. . .	Id.	. . . . .
French language	Id.	Id.	Id.	Id.	Id. } At the
German language	Id.	Id.	Id.	Id.	Id. } choice
English language	Id.	Id.	Id.	Id.	Id. } of pupil.
Study of commercial products	Id.	Id.	Id.	. . .	. . . . .
Commercial and maritime law	Id.	Id.	. . .	Id.	. . . . .
Commercial bureau	. . . . .	. . .	. . .	Id.	. . . . .
Penmanship	. . . . .	. . .	. . .	Id.	. . . . .
	Civil law.	Id.	. . .	. . .	. . . . .
	Private International law.	. . .	. . .	. . .	. . . . .
	One oriental language.	. . .	. . .	. . .	. . . . .

Course of the Third Year.

Commercial Section.	Consular Section.	Normal Section.			
		Administration.	Study of Commercial Products.	Accounting.	Languages.
Italian literature	Id.	Id.	Id.	Id.	Id.
German language	Id.	Id.	Id.	Id.	Id. } At the
English language	Id.	Id.	Id.	Id.	Id. } choice
French language	Id.	Id.	Id.	Id.	Id. } of pupil.
Commercial and Industrial law	Id.	Id.	. . .	Id.	Pupils are
Study of commercial products	Id.	Id.	Id.	. . .	trained in
History of commerce	Id.	Id.	Id.	. . .	foreign cor-
Commercial statistics	Id.	Id.	Id.	. . .	respondence
Political economy	Id.	Id.	. . .	. . .	and account-
Commercial bureau	. . . . .	. . .	. . .	Id.	ing in the
Commercial arithmetic	. . . . .	. . .	. . .	Id.	commercial
	Civil and private international law.	Civil law.	. . .	. . .	bureau.
		. . .	. . .	. . .	
	One oriental language.	. . .	. . .	. . .	

Course of the Fourth Year.

Consular Section.	Class in Administration.	Class in Study of Commerc'l Products.	Accounting.	Language.
French language	Id.	Exercises in language and the study of commercial products.	Exercises in languages, accounting, and the commercial bureau.	One language at the choice of pupil. Pupils are trained in giving lessons under the direction of the professor.
English or German	Id.			
Diplomatic and political history	Id.			
Theoretical statistics	Id.			
Public international law . . .	Id.			
Criminal law	Id			
Constitutional law	Id.			
Judicial procedure	Id.			
One oriental language	Id.			

Course of the Fifth Year.

Consular Section.	Class of Administration	Class of Languages.
Diplomatic and political history	Id.	Pupils give lessons in the other sections.
One oriental language.		
Exercises preparatory to the consular examination prescribed by the Ministry of Foreign Affairs.	Exercises preparatory to the examination prescribed by the Ministry of Agriculture, Industry and Commerce.	

CHAPTER IV.

EXAMINATIONS ; REWARDS ; PUNISHMENTS.

No one is admitted to this school except after passing an entrance examination, unless he possesses a diploma granted by the Technical Institute, or a school of equal rank. Upon leaving the school the pupils receive certificates of having completed the courses. Diplomas are given to students in the commercial section at the end of three years ; in the section of accounting and of the study of commercial products at the end of four years ; in the consular, administrative and language sections at the end of five years.

The pupils of the normal section receive, moreover, upon the payment of 100 francs a certificate of fitness to teach. The pupils who distinguish themselves in the course receive also grants of money.

The means of discipline are : the return of any paper which has been poorly done ; warning ; temporary exclusion ; exclusion from examination ; exclusion from the session ; and final exclusion from the school.

The pupils, graduating from the commercial section, are very well trained ; all commercial careers are open to them. Those who graduate from the consular section have been allowed, since 1870, to compete for

consular positions. Formerly a certificate of university studies and a diploma of licentiate of law were demanded. The pupils in the normal section are, upon graduation from this school, eligible to appointment as teachers. They are appointed immediately upon graduation, if there are vacant professorships. If not they easily find employment in the various ministries or other departments of public administration.

About fifteen per cent of the pupils fail to pass the final examination, and obtain no diploma. This figure must be considered very satisfactory in view of the length of the course and the severity of the examination.

CHAPTER V.

GOVERNMENT; RECEIPTS; EXPENSES; PERSONNEL.

The Superior School of Commerce in Venice is governed by a Directing Council, composed as follows:

First.—A president and vice-president, appointed by the province.
Second.—Two delegates chosen by the Chamber of Commerce.
Third.—Two delegates chosen by the Municipal Council.
Fourth.—Two delegates appointed by the government.
Fifth.—One director named by the Directing Council.
Sixth.—One secretary and a vice-secretary.

The tuition fees and the subsidies are sufficient to cover the annual expenses of the school. The professors are paid from 3000 to 7000 francs. Since 1873 the government is represented in the council of the school by two delegates. The appointments, suspensions and removals of professors have been reserved to it from that period. The school has eighteen professors and two assistants. It is only after three years' work that the instructors receive the title of professors.

CHAPTER VI.

GENERAL CONSIDERATIONS.

The Superior School of Commerce at Venice is a prosperous establishment. The grade of the work has been raised from year to year, and the results have been very advantageous to Italian commerce; Venice itself spares no labor in aiding the development of this institution. The subsidy of the government should be increased. The school has a very fine museum of commercial products and a large library, for the support of which 2000 francs are set apart in the budget of the school.

The provinces, the cities, the various chambers of commerce follow the example of the government and grant subsidies to the school. But that which would be better than subsidies would be for Italian merchants to select their clerks from the pupils of their own schools of commerce, and not to prefer German to Italian clerks. In Italy, as in France, there is no lack of criticism of commercial instruction, and to be logical one ought not to employ foreigners who have received their education in such schools. We should give then the same advice to Italian merchants as to French: "Take an interest, gentlemen, in your commercial schools, multiply them, and give the preference to their graduates over those of foreign schools."

In spite of prejudices the example given by Venice has been followed, and new schools of commerce have been established in various cities of Italy. The future of these schools seems to us assured, provided they give a really professional character to their instruction.

In 1875 a committee of employment was established under the auspices of the Directing Council, in order to aid the graduates of the school in finding positions. This committee selected as its director the president of the Chamber of Commerce in Venice. It is composed of the members of the Directing Council and the professors of the school. The success of the committee has been marked; up to the present no graduate of the school has failed to find a position worthy of his education.

The new kingdom of Italy has encouraged the development of education and educational institutions in a thorough and systematic way. It has not altogether neglected the field of commercial education, though it has not done as much along this line of training as in others. The school at Florence, with a two-years' course, was organized in 1877; while that at Turin was organized in 1856, by Jean-Joseph Garnier, who came from the Superior School of Commerce in Paris. The school at Genoa, founded in 1883, is one of the best equipped and most promising of all the Italian schools. There are also such schools in several other of the leading cities of Italy, such as Naples and Rome and some smaller places.

F.

HIGHER COMMERCIAL INSTRUCTION IN ENGLAND.

This subject can unfortunately be disposed of in a very few pages. It is not far from the truth to say that there is no such instruction given in England at all, at least such thorough, systematic and advanced instruction as would justify our putting it in the same category as that of France, Austria or Germany. It is in this department as in so many others. The genius of the people—so eminently commercial—the favorable situation of the country and the many other circumstances which have combined to put England at the very head of commercial nations, have also seemed at first to dispense with the necessity of giving time and labor to systematic school preparation for such occupations. On the other hand, the many unfavorable circumstances which have combined to prevent the growth of commerce and industry in Germany, France and Austria have brought these nations to a recognition of the fact that thorough education along all these lines was the only hope of their being able to compete with England at all. The result has been what might have been expected. Owing to the superior education and training of her youth, Germany has been steadily diminishing the disadvantages of her position and English merchants are now awaking to the fact, not only that German trade is increasing more rapidly than English, but that even the trade of England herself is passing into the hands of German merchants who have settled in London. In a word, education is producing its legitimate results in this as in other fields, and the extracts from English writers on the subject which follow will serve to show that England is now waking up to the necessity of providing for instruction and training along these lines.

One of the best evidences of this fact is to be found in Sir Philip Magnus' work on industrial education, in which an entire chapter is devoted to this subject of mercantile training.

"The question of how best to suit our system of educational machinery to the requirements of social life and the additions, if any, that should be made to it, is now engaging the serious attention of merchants, manufacturers, teachers and statesmen. The importance of the question is no longer doubted, and discussions of the subject are invited, with a view of eliciting the opinions of persons who, by their own knowledge and experience, are able to contribute to the solution of what must be regarded as a problem of national importance.*

"To this end an important conference was held under the auspices of the Chamber of Commerce, on November 23, 1887, when Sir John Lubbock, who was especially qualified to speak on this subject, delivered a very suggestive address, in which he pointed out many reasons which prevent our children from obtaining in our secondary schools, as at present organized, the preliminary training which might best prepare them for practical and commercial pursuits.

"He was followed by Dr. Percival, who rightly said:

"'The true educational method for an industrial and commercial population like ours, is to fix our attention, far more than hitherto,

* See *Industrial Education, by Sir Philip Magnus. (London, Kegan Hall, Trench & Co.) Chapter III. Mercantile Training. Schools of Commerce.*

on the practical needs of our population, also to endeavor to liberalize what we call the practical studies, and to dismiss once for all the old world idea that studies which have a practical bearing on the needs of boys growing up in our schools, somehow lose their humanizing qualities. The development of our trade and commerce may be said to depend on knowing not only how to produce, at least cost, what is most wanted, but also how to buy and to sell to the greatest advantage. We may take it for granted that the full benefits of technical instruction will fail to be realized, unless opportunities are afforded by which our youths may obtain that special kind of training which is calculated to make them good business men.'

"The economy of production is closely associated with that of distribution in the machinery of commerce, and the connection between the factory and the merchant's office is very intimate, and tends daily to become more so. The progress of science is gradually converting the factory into a laboratory, in which raw materials are altered in substance and form, and the success of productive industry depends on the skill and ingenuity with which this process of conversion is carried on. But mercantile success depends not only upon the skill and ingenuity shown in the production of goods, but also on the care exercised in the purchase of the material employed, and on the special knowledge and ability developed in the sale of the manufactured products. The highest technical knowledge might be employed in producing goods for which there was no demand, and, as has frequently happened, for which the demand had ceased and commerce thereby would not be advanced. And goods might be produced, excellent in quality, but unsalable except at a loss at places already fully supplied. What is needed for the development of commerce is not only the faculty of production, but also of distribution. The market is a necessary adjunct of the factory.

"A consideration of the kind of training which is best calculated to fit a person to buy and sell and to engage in any of the operations, including banking, connected with the work of distributing and of bringing home to the consumer the products of industry, is the problem of commercial education.

"The questions of technical and commercial education are also closely associated, though it is difficult to consider them except in connection with each other. Speaking generally, technical education may be said to have reference to the work of production, and commercial education to that of distribution. But as the character of the goods produced by the manufacturer must depend, to a great extent, upon the tastes and requirements of the consumers; these should be ascertained by those engaged in the work of distribution.

"Mercantile success may be regarded as the function of two factors; one of which has reference to the skill displayed in the process of manufacture, and the other to the activity and economy shown in bringing the products of industry into the hands of the consumers.

"Hitherto the institutes considered the question of technical education, and the closely allied question of commercial education has remained somewhat in the background.

"The progress which has been made, during the last few years, in providing the necessary supplementary education for persons engaged in productive industry, is, on the whole, satisfactory, and the time has now

come for considering the kind of training which is needed for young persons preparing for a mercantile career.

"The altered conditions under which trade is now carried on, have given to the solution of this problem a new, and until recently, a not sufficiently recognized importance. The application of science to the means of locomotion and communication has changed many of the essential features of the geography of fifty years ago.

"Distant countries are now closely united by the swift ocean steamers, by the network of rails, and by telegraphic wires. This development of scientific applications to the means of transit and communication is, perhaps, a revolution in the system of commerce, the effect of which we are only gradually coming to realize. It has intensified the severity of competition between different countries. It has diminished the value of the raw material in relation to that of the manufactured product. It has lessened the difficulties due to natural resources. It has narrowed the margin of profit, necessitating the exercise of the greatest economy in the management of the mercantile department or manufacturing business, and is most vigilant in securing the advantages of differences of exchange and in searching, wherever they may be found, for new and promising markets.

"Though we hear, as we often do, successful manufacturers and merchants speak discouragingly of the importance of commercial education, and tell us how, entering into the factory or office at an early age, they there acquired the practical experience to which they ascribe their fortune, we cannot but feel that such men overlook the fact that the conditions under which trade is now carried on are wholly different from what they were fifty years ago. And it is owing to this difference that a different and special kind of training has become indispensable. No one can contemplate the changes which have taken place during the present half century, without realizing their leveling influence upon the development of commerce, and the growing importance, as a factor of mercantile success, of that wider knowledge which enables those engaged in commerce to understand and to take advantage of all favorable conditions in the conduct of business operations.

"The merchant's vision must extend beyond the limits of his own town or country. His observation must be widened so that literally he may be able to survey man's mind from China to Peru. The range of his markets is continually extending, and his knowledge should be co-extensive with the area of his transactions. The success, which owing to our natural resources, attended our early efforts to apply some power to productive industry, produced a feeling of over-confidence among our people and led us to disregard a connection which ought to exist between school training and the business of life, while the business circumstances of other countries resulted in an earlier recognition of this important relation. For this reason, technical and commercial schools were established abroad many years before the necessity for their creation was realized in this country. But the leveling influences of scientific progress, to which I have referred, have placed us at a comparative disadvantage with other countries, or rather have lessened the advantages we formerly possessed on account of our natural resources, and have made it imperatively necessary that we should seek compensation in the endeavor to reap all the benefit we can from the improved and adequate education of our industrial classes.

"That our own school system does not offer the requisite training to enable our youths to compete on equal terms with the youths of other countries, especially of Germany, is shown by such evidence as may be found in the reports of the commissioners on Technical Instruction of the department of trade and industry, as well as in the reports of several of our consuls in different parts of the world. From these documents it appears that it is mainly owing to German competition that our foreign trade is shrinking, and it is in Germany that the most abundant provision has been made for the complete educational equipment of young persons who are engaged in mercantile pursuits. The commissioners tell us that the increasing severity of this competition both in our home and neutral markets, is especially noticeable in the case of Germany, and in every quarter of the world the perseverance and enterprise of the Germans are making themselves felt. In the actual production of commodities we have few if any advantages over them, and in the knowledge of the markets of the world, the desire to accommodate all local tastes and idiosyncrasies, a determination to obtain a footing wherever they can and the tenacity in retaining it, they appear to be gaining ground upon us.

"This advance of German trade does not appear to be owing to any falling off in the efficiency of the British workmen, but solely to the superior fitness of the Germans, due exclusively to the more systematic training they receive for mercantile pursuits. The commissioners tell us that whilst in respect to certain classes of products the reputation of our workmanship does not stand as high as it formerly did, those who have had personal experience of the comparative efficiency of labor carried on under the conditions which prevail in this country and foreign countries, appear to incline to the view that the English workman, notwithstanding his shorter hours and higher wages, is to be preferred. They further state that in the matter of education, we seem to be particularly deficient as compared with some of our foreign competitors, and this remark applies not only to what is called "technical education," but to the ordinary commercial education which is required in mercantile houses, and especially the knowledge of foreign languages.

"The recommendation of the commissioners that Her Majesty's consular and diplomatic officers should be instructed to report any information which appears to them of interest as soon as they obtain it, and that it should be as promptly published at home when received, has resulted in the publication of a series of reports which fully bear out the conclusion at which the commissioners have arrived in regard to the deficiencies of our commercial education; to the activity displayed by persons in the search of new markets and the readiness of manufacturers abroad to accommodate their products to local tastes and peculiarities.

"In several of the reports recently published, attention has been called to the importance to this country of possessing an army of commercially trained agents, who shall be able to discover foreign markets, to inform English manufacturers in regard to the requirements of these markets, and to follow the style of home-made goods.

"Many statements might be made to show that our trade with foreign countries is distinctly suffering in consequence of the want of commercial knowledge and activity among our commercial classes. At home the pinch of competition is equally felt, and is due partly to the same cause. The answers to a circular addressed by the London Chamber of Commerce to

the leading city houses have shown the extent to which foreign clerks are employed by commercial firms in London, and also, what is less flattering to us, the reason for the preference shown for them.

"It appears that thirty-five per cent of the firms replying to the circular, employ foreign clerks, and that less than one per cent of English clerks are able to correspond in any foreign language. From several of the answers received, it also appears that preference is given to foreigners on account of their generally superior education, and of their special qualifications for general work. According to many of the witnesses the foreigner is at present the better all-round man; better equipped, both with the special technical knowledge of his particular industry and with the wider culture which enables him to adapt his knowledge and his training to the varying demands of modern commerce.

"Now, not only is the recognition of this fact somewhat humiliating to us as a nation, but the fact itself serves to explain some of the causes of the success of foreign competition of which we complain. In the first place, every foreigner employed in an English firm displaces an Englishman who might, and would be, employed if only he were properly educated. Moreover, many of these foreign clerks after having learned what they can as regards our manufactures, our markets and modes of conducting business, return to their native land to utilize that knowledge as our competitors and rivals. And even of those who remain here and establish new firms, a large number, naturally, show a preference for the foreign manufacturers with whom they stand in relation, and from whom they obtain goods for the supply of the markets in which they deal.

* * * * * *

"The English Society of Arts has arranged for examinations in commercial geography and in other subjects useful to the commercial student, but of late no examinations have been held in commercial geography, as only twenty-five pupils, not from one centre only, but from the entire kingdom, have presented themselves. Nothing perhaps could show more strongly the total neglect of commercial education in Great Britain.

* * * * * *

"On leaving the elementary school the great majority of children go at once into the office, factory or shop; a few continue their education in some higher school. For both of these classes a special training is desirable if they are to be occupied with commercial pursuits. For those who leave school at an early age continuation classes are indispensable, if the greater amount of the national outlay on education is not to be lost. I have known numerous instances in which lads of eighteen and twenty years of age have been unable to avail themselves of the instruction given in the technical and scientific classes now established, in consequence of their having forgotten the little they had learned in school."

COMMERCIAL CERTIFICATES.

"The comparative neglect of commercial education is, by some persons, held to be attributable to the circumstance that the examining bodies offer no encouragement in the form of systematic examinations. Consequently, the school authorities took up subjects for which certificates were obtainable. It is probably nearer the truth to say that until recently there have been practically no demands for commercial certificates. Doubtless, we owe the new certificates to the keen competition to which

the commercial industries are now subjected. But to be of real service, commercial education must have for its basis sound general education, and if to this is added a more thorough acquaintance with modern languages, commercial geography and arithmetic, the new acquisition must prove invaluable to those who intend to take an active part in the promotion of the great industries which have contributed so largely in making the British nation what it is."*

The London Chamber of Commerce has issued a scheme of subjects of examination for commercial certificates.

I. The subjects for junior students up to the age of fifteen or sixteen and for senior students from sixteen to nineteen are as follows:

Obligatory.

1st. English, including handwriting, orthography, grammar and composition.
2d. Commercial History of the British Isles, colonies and dependencies; Geography, including the elements of physical geography, and ordinary geography, with special reference to commerce and industry.
3d. Arithmetic, including a general knowledge of foreign weights, measures, currencies and exchanges.
4th. Algebra, including quadratic equations, Euclid, books I.–III. Elementary Mechanics.
5th. Bookkeeping and accounts.
6th. A modern foreign language; one of the following: (*a*) French, (*b*) German, (*c*) Spanish, (*d*) Portuguese, or (*e*) Italian, comprising translation, composition, dictation and conversation.
7th. Elementary drawing (free-hand, geometrical or designing).

Optional.—One, at least, of the following must be taken. If Latin is chosen, then one other subject must also be taken:

1st. Mechanics and hydrostatics (a higher knowledge).
2d. Shorthand (any system).
3d. Drawing (advanced, free-hand and model or designing, or mechanical or geometrical drawing).
4th. Chemistry (theoretical and practical).
5th. Sound, light and heat.
6th. Electricity and magnetism.
7th. Knowledge of the commercial value of the following: Elements of botany, zoölogy, geology and physiology.
8th. One or more of the modern foreign languages not taken as an obligatory subject.
9th. Latin as the second optional subject.

(Examination takes place at the College of Preceptors during the first week of July.)

II. No senior examination has as yet taken place, but it is proposed to hold one in the near future, of which the following will be the subjects:

Obligatory.

1st. Foreign languages; any two of the following: (*a*) French, (*b*) German, (*c*) Spanish, (*d*) Portuguese, or (*e*) Italian.
2d. Mathematics.
3d. Commercial geography.
4th. Commercial history.

* *Educational Annual.* George Philip & Son. London, 1891.

Optional.—Latin, and one from each of the following groups, or three from any one of them:

GROUP A.

1st. Commerce.
2d. Commercial and industrial law.
3d. Banking and insurance.

GROUP B.

1st. Mechanics and hydrostatics.
2d. Physics.
3d. Chemistry.
4th. Mineralogy and petrology.
5th. Metallurgy.
6th. Botany.
7th. Zoölogy.
8th. Microscopical examinations.
9th. Drawing (free-hand or geometrical, or mechanical, or designing, or photography).

After passing this examination the youth will receive a higher commercial certificate, on which will be entered the subjects in which he has passed, and those in which he has particularly distinguished himself. It is also proposed to grant separate certificates for proficiency in each subject for candidates who may not present themselves for the general examination.

The Oxford and Cambridge schools examining boards have also instituted examinations for commercial certificates. The first examination took place in 1888, and until further notice the examinations will continue to be held in July and December respectively.

The subjects of examination of the Oxford delegacy and the Cambridge syndicate are intended to be identical, but as there is some slight difference in the descriptions which have been published, both statements are given below:

CAMBRIDGE.

I. 1, Latin; 2, French; 3, German; 4, Spanish; 5, Italian.
II. 1, Mathematics.
III. 1, English; 2, Commercial History of the British Isles and Colonies, including Geography; 3, English History; 4, Political Economy.
IV. 1, Drawing; 2, Inorganic Chemistry; 3, Organic Chemistry; 4, Mechanics, including Hydrostatics and Pneumatics.
V. 1, Electricity; 2, Magnetism.
VI. Sound, Light and Heat.

Candidates must satisfy the examiners, first, in one of the four languages from 2 to 5 in Group I., and in Group III., Nos. 2 and 3; also in elementary drawing (geometrical or free-hand), elementary mechanics, and one of the following subjects: Latin, a modern language not offered in the preceding statement, English history, political economy, or one of the subjects in Group IV.

OXFORD.

I. 1, Latin; 2, French; 3, German; 4, Spanish; 5, Italian.
II. 1, Arithmetic; 2, Algebra, Euclid.
III. 1, English Geography; 2, English History; 3, Political Economy.

IV. 1, Drawing; 2, Inorganic Chemistry; 3, Organic Chemistry; 4, Mechanics.
V. 1, Electricity; 2, Magnetism.
VI. Sound, Light and Heat.

In order to obtain a certificate, the candidate must pass in, at least, one of the languages in Group I.; in English geography and commercial history of the British Isles and colonies, in mathematics, in elementary drawing, in elementary mechanics, and in one other subject. The aim of the examination is to include such subjects as boys of sixteen years of age may reasonably be expected to pass, preparatory to going into business.

The University of Oxford announced that no examinations for Commercial Certificates would be held in 1893. This is not surprising in view of the fact that so few presented themselves for examination in 1892; nor is it surprising that so few presented themselves when we consider that there was not a single institution in all England which made it its chief business to furnish instruction along the lines of higher commercial instruction.

Below is printed the papers set in the last Oxford examination for Commercial Certificates in Letter Writing, Commercial Geography, English History and German. The exercise in Letter Writing is an admirable one and is of much more educational value than the ordinary essay and theme writing of an American college.

PAPERS SET IN EXAMINATION FOR COMMERCIAL CERTIFICATES.*

I.

PRÈCIS AND LETTER WRITING.

1. Having read the accompanying correspondence—

Draw up a Prècis, i. e. *a brief and clear statement of what passed, not letter by letter, but in the form of a narrative.*

DIRECTIONS.—The object of the Prècis is that anyone who had not time to read the original letters might, by reading the Prècis, be put in possession of all the leading features of what passed. The merits of such a Prècis are—(1) to contain all that is important in the correspondence, and nothing that is unimportant; (2) to present this in a consecutive and readable shape, expressed as distinctly as possible, and as briefly as is compatible with completeness and distinctness.

1 Dynevor Terrace, September 9, 1891.

Dear Sir:—I have received this morning the enclosed letter relating to the above house. As you are fully acquainted with all the circumstances under which it was let to the present occupant and have the lease of it in your possession, I should be obliged if you would kindly give your attention to the matter and inform me at your earliest convenience as to what steps you advise me to take in reference thereto.

Believe me, Yours sincerely,

RICHARD GUNTON.

To R. Gribble, 1 Gray's Inn Road.

*University of Oxford. Local Examination. Papers set for the examination for Commercial Certificates held in 1892. Oxford, 1892.

[ENCLOSURE.]

Kynaston House, Chiswick, September 8, 1891.

Dear Sir:—I am desirous of calling your attention to the condition in which this house is, owing to the action of the Local Board in the course of carrying out their "useful" drainage schemes. Quite recently I was surprised by receiving from them a notice calling on me to allow their men to inspect my premises. To make a long story short, the men came, and the following day, to my astonishment, I received a second notice stating that it was the intention of the board to lay down a pipe through and underneath my house and thence down to the river. I called at the offices of the board and had an interview with the authorities, but my expostulations and representations that the proposed pipe would be likely to injure the house and render it damp and unfit for habitation were in vain. The men came, and on August 20th proceeded with the work. It is evident from what has subsequently transpired that the work was done improperly. Not long after the pipe was laid down and the ground put in order, my servants discovered that the cellars and basement showed signs of damp, and in some places considerable damage has been caused by the entrance of water. In these circumstances I am obliged to write to you to take some steps to remedy the mischief. I need not remind you that at the time I took the lease I hesitated considerably whether it was prudent to take such an old house and one so near the river, and that it was only after you agreed to lay down concrete in the basement, and to secure me from all river damage by a clause in the lease, that I consented to become your tenant. I shall be glad to hear from you as soon as possible, as unless something is done I shall suffer serious inconvenience, which I feel sure you would deprecate as much as anyone.

Believe me, Yours sincerely,

LEONARD CARSTAIRS.

To Richard Gunton, 1 Dynevor Terrace.

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1 Gray's Inn Road, September 10, 1891.

Dear Sir:—I beg to acknowledge the receipt of your letter of the 9th inst. I have looked at the lease and fully considered the matter. It appears to me that the best course to pursue is to write to the tenant that you are going to apply to the Local Board for compensation for the damage done, and that you will inform him of their decision. If it meets your approval, we will write to the Board, acquainting them with the facts, asking them to make good the damage and put the premises in such a state as to render them safe in future. Of course all delay should be avoided, but we will not proceed in the matter until we hear from you further.

Yours sincerely,

RICHARD GRIBBLE.

To Richard Gunton, 1 Dynevor Terrace.

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1 Dynevor Terrace, September 10, 1891.

Dear Sir:—I am duly in receipt of your letter, and hasten to reply to the same. I should be obliged if you would make the application to

the Board, and leave to your discretion the terms of the application. I am naturally much annoyed by all that has taken place.

Yours truly,

RICHARD GUNTON.

To Richard Gribble, 1 Gray's Inn Road.

Re Kynaston House, 1 Gray's Inn Road, September 11, 1891.

Dear Sir:—I am desirous of calling your attention to the damage caused to the basement and cellars of Kynaston House by the negligence of your servants in laying down a drain pipe underneath the premises in question. The owner has asked us to apply to you for compensation for the damage already done, and to ask you to send workmen to repair the pipe and so prevent future damage. We should be obliged by an early reply as the tenant is threatening that he will be obliged to leave the house unless steps be taken to remedy the mischief and unless he is fully compensated for the damage and inconvenience that has been caused to him. Waiting an early reply, I am,

Yours respectfully,

Local Board, Chiswick. RICHARD GRIBBLE.

Local Board, Chiswick, September 12, 1891.

Dear Sir:—We are in receipt of your letter, and beg to state that the damage alleged to have been caused by our servants is of a trifling description. We have inspected the premises, and are satisfied that very little needs to be done to the drain. We are anxious, however, to avoid unpleasantness, and therefore state our willingness to pay your client 25*l.*, which is the very utmost we can offer for damage which our surveyor assures us could be remedied for a much smaller amount. Hoping that this will meet the approval of your client,

Believe me, Yours respectfully,

W. HOPKINS, Sec. to Local Board.

R. Gribble, 1 Gray's Inn Road.

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1 Gray's Inn Road, September 12, 1891.

Dear Sir:—We have informed our client of the contents of your letter of to-day, and are instructed by him to inform you that he thinks you have taken an entirely erroneous view of the matter. He is unwilling to accept the sum you offer, but is willing to put the matter in the hands of Mr. Jenkins, of Richmond, a competent surveyor, for arbitration. In case you are not willing to proceed to arbitration, the only course left will be to obtain the opinion of a court of law on the matter, and we shall be pleased to know the name of your solicitor.

Yours respectfully,

Local Board, Chiswick. RICHARD GRIBBLE.

Local Board, Chiswick, September 12, 1891.

Dear Sir:—We are unable to assent to your view of the matter, and must therefore leave you to take your own course. Messrs. Tatham, 4 Chancery Lane, are our solicitors.

Yours sincerely,

W. HOPKINS, Sec. to Local Board.

1 Gray's Inn Road

2. Write a letter on *one* only of the following subjects:

(1) S. & Co., a firm in Bombay, are desirous of exporting goods for the Manchester market. They write to B. & Co., commission agents in Manchester, offering and proposing terms on which they are willing to consign goods to them for the purpose of sale. In the letter describe fully the nature of the goods, the duties to be performed by B. & Co., the terms as to shipment and insurance of the goods, the terms as to what is to be done by B. & Co., with the proceeds of sale, and the terms as to B. & Co.'s, commission with any other terms that would be likely to be embodied in such a proposal.

(2) Write a letter of application to a bank or commercial firm from a person desirous of obtaining the post of clerk or manager in such bank or firm. In the letter *fully* state what experience the applicant has had previously, why he is leaving his former occupation, on what terms he is willing to accept the employment, and all facts which are likely to influence the bank or firm in accepting his offer.

(3) Explain fully the meaning of the following mercantile expressions: Shipping documents, net proceeds, rebate, course of exchange, dock warrant, endorsement of bill, notarial protest, general average, drawing bill against goods to arrive, del credere agency, accommodation bill, crossed cheque.

II.

COMMERCIAL GEOGRAPHY.

[*Each Candidate will receive the same outline maps as those set to Junior Candidates.*]

1. On the accompanying map of England and Wales mark the iron fields, the salt districts, the railways from London to Plymouth, Holyhead and Newcastle-on-Tyne, and the packet stations for regular communication with the continent, giving in each case the name of the continental port to which steamers run.

2. On the accompanying map of Europe, place Astrakhan, Bergen, Brindisi, Chemnitz, Dantzig, Frankfort, Galatz, Nantes, Patras, and explain the nature of the commercial importance of each.

3. Make a sketch-map of the Spanish Peninsula, showing the wine districts, the mining districts, and the fruit ports.

4. State the course of the main railway routes from the east to the west coast of North America.

5. France is said to be naturally the richest country in Europe. On what facts as to climate, products, and geographical position is this opinion based?

6. What are maize, tobacco, esparto, flax, petroleum, zinc, amber and from what countries are they obtained.

7. What are the exports of the West Coast of Africa, New Zealand, the River Plate? Name the ports of each.

8. What differences would be made in the course of trade to and from England by the closing of the Suez Canal?

9. Point out the advantages and disadvantages, relatively to trade, of the geographical position of Antwerp, Belfast, Bombay, Bristol, Southampton, Trieste.

10. Discuss the respective merits of land and sea carriage for goods.

III.

GERMAN.

[*Candidates must satisfy the Examiners in Sections* A, B, *and* C *of this paper: neatness and handwriting will be taken into account. The letter in Section* C *must be written in German characters; no marks will be allowed for a letter written in Roman characters.*]

A.

Translate into English:

(1) Wenn wir Wasser in einem offenen Gefässe hinstellen, so wird es sich nach Verlauf einiger Zeit vermindern, und nach längerer Zeit ganz verschwunden sein. Wir sagen alsdann, das Wasser sei verdunstet, aber wir wissen sehr wohl, dass es nur seine Gestalt verändert, hat, und als Dunst in die Luft gestiegen ist. Die Ausdünstung wird durch Wärme befördert; warmes Wasser in einer Schale verliert sich schneller als kaltes Wasser. Bringt man eine Schale mit warmem Wasser in ein kaltes Zimmer, so werden die Dünste sichtbar; wir sehen sie hingegen nicht, wenn die Luft im Zimmer bis zu demselben Grade, wie das Wasser, erwärmt ist.

(2) Wollen wir den schönen, immergrünen Baum, der das ganze Jahr seine wohlriechenden, schneeweissen Blüten trägt, in seiner natürlichen Freiheit sehen, so müssen wir freilich nicht nach Westindien gehen. Sein Vaterland ist auch nicht das glückliche Arabien, wo allerdings die feinste Sorte Kaffee wächst, die in den Handel kommt, sondern das alte Mohrenland und Abessynien; dort finden sich die Kaffeewälder; dort wächst der echte Kaffee wild, während er in Arabien der sorgfältigsten Pflege bedarf. Der Baum kann 20 bis 40 Fuss hoch werden, aber in Westindien wird er nur 4 bis 6 Fuss hoch gehalten, damit man die Früchte um so leichter pflücken kann. Die immergrünen Blätter sind lederartig, ähnlich denen der Pomeranze, länglich eirund, nicht gezahnt und wellig. Die Blüten sitzen je 4–7 auf kurzen Stielen in den Blattachseln gedrängt beisammen und umgeben wie in einem Quirl den Stengel. Die Frucht ist eine eirunde, fast kugelige, etwa einen halben Zoll lange, sehr kurz gestielte Beere mit einem weichen süssen Fleisch; sie hat die Grösse einer Kirsche und sieht anfangs grün, dann rot, zuletzt violett aus.

B.

Translate:

Liverpool, den 5. Januar, 1892.

Herrn C. Becker,
Hamburg.

Wir sind unserm Freunde, Herrn F. Bolton, für seine Empfehlung an Ihr wertes Haus sehr verpflichtet, und in Erwiederung Ihres geschätzten Schreibens von 29. v. M. erlauben wir uns Ihnen mitzuteilen, dass wir von der uns gemachten Konsignation für Rechnung des Herrn Robson, wie auch von Ihren Vorschriften bezüglich der Ablieferung der Güter, so wie des Kredits, den wir diesem Herrn für dieselben zu bewilligen haben, gehörig Kenntnis genommen haben.

Wir können Ihnen bereits die glückliche Ankunft unsers besagten Freundes mit den bewussten Gütern melden. In einigen Tagen sollen Sie wieder von uns hören, wo wir Ihnen dann nähere Nachrichten geben zu können hoffen. Die Feuerversicherung werden wir besorgen, so bald die Güter ausgeladen sind.

Es würde uns grosses Vergnügen gewähren, wenn dieses erste Geschäft zwischen uns zu einem fortdauernden und gegenseitig nützlichen und angenehmen Briefwechsel führen sollte, den zu unterhalten wir es unserseits an nichts fehlen lassen werden.

Unsere Geschäfte sind nicht sehr belebt, und Manufakturwaren sowohl wie Kolonialprodukte wenig begehrt. Von letzteren schliessen wir Ihnen Preisliste bei.

Hochachtungsvoll und ergebenst,

G. Hartmann & Co.

C.

Write a letter in German (the letter must not be written in the third person, but in the form of that in Section B) to the following effect:

(1) Acknowledge receipt of Messrs. Hartmann & Co.'s letter and thank them for their promptitude in attending to the instructions given as to the delivery and insurance of the goods.

(2) As the prices of tea and coffee quoted in Messrs. Hartmann & Co.'s circular are fairly low, send an order for 50 chests of Ceylon tea and 80 bags of Jamaica coffee.

(3) Inquire if there be any likelihood of a rise in the prices of Jamaica ginger, and request Messrs. Hartmann & Co. to wire if such be the case.

(4) Request Messrs. Hartmann & Co. to insure the goods and to despatch 25 bags of coffee by the quickest route—viz. by rail to Hull and thence by steamer to Hamburg—and the tea, together with the remaining 25 bags of coffee, by sailing vessel.

(5) State that on receipt of invoice and bill of lading, cheque for half the amount will be sent immediately, and a bill at three months in payment of the other half.

D.

Give the German equivalents for:

(1) We have credited you with the 5½ per cent which we have recovered from the underwriters.

(2) This endorsement offers us no guarantee.

(3) We have exchanged the shares for 5 per cent bonds; you will not lose by the exchange.

(4) The General Post Office.

And the English equivalents for:

(5) Die Börse hat sich von der Flauheit, die seit einiger Zeit herrschte, erholt.

(6) Fracht auf Güter per Ton Mass.

(7) Unverzinsliche Staatspapiere.

(8) Hypothekirtes Eigentum.

IV.

ENGLISH HISTORY.

1. Account for the great expansion of English power in the reign of Elizabeth.

2. Point out the importance of the "Seven Years' War" as an epoch in the history of the English in America.

3. When and why did the English population begin to flow out of the country into the towns.

4. Explain the terms—monopoly, benevolence, purveyance; and show the commercial importance of these things being abolished

5. What was the theory of the seventeenth and eighteenth centuries as to the proper relations between the mother country and colonies?

6. Give the dates of the acquisition by England of Malta, St. Helena, Dunkirk, Jamaica, Mauritius, and point out the political or commercial importance of each.

7. How, and how far, did the maritime power of England enable her to cope successfully with Napoleon?

8. Give a very short account of the Darien Scheme, the Navigation Act, the Peace of Utrecht.

9. Mention the turning-points in the history of agriculture in England.

NOTES ON COMMERCIAL EDUCATION IN ENGLAND.

I.

In "Studies in Secondary Education," edited by Arthur H. D. Acland and H. Llewellyn Smith (Macmillan & Co., 1892) a few references are made to the work in commercial education in England. But the manner in which these references are made, as well as the matter, shows the indifference with which the average educationalist regards the subject as well as the small part which commercial schools play in the general educational system of the United Kingdom. There is a commercial school in connection with the Liverpool Institute, with 750 pupils. It takes boys at eight or nine years of age, though most of the pupils are from twelve to thirteen on entering the school. The education given is purely scientific and commercial, and the fee five pounds a year. The parents seem to be clerks, small shopkeepers, engineers on steamships and skilled artisans. In a great many cases the boys only stay a few months in the school, merely having gone to get a certificate from the head-master. This enables them to say that they have attended the institute, and they are better able to get posts as clerks, etc., in London offices. This seems to be very much such a school as our commercial colleges; for as soon as the boys show special aptitude for study they are shifted from the commercial to the high school to enable them to carry their education further. There are some twenty teachers in this department, of whom four hold B. A. degrees; the others have no diplomas.

In connection with the Liverpool College is also a commercial school, giving a purely commercial education, five of whose instructors hold government certificates, and two have passed the London intermediate examination.

Professor Lowry, who wrote an account of secondary education in Liverpool, says that these two schools are alone sufficient to condemn the theory that secondary education for the poorer middle classes should be self-supporting. The salaries in both of these schools are very low, so that they, evidently, cannot get a very high grade of talent for the work.

The following remarks on commercial education, by A. T. Pollard, head-master of the City of London School, throw much light upon the backward state of commercial education in England. When a man of Mr. Pollard's position imagines that nothing new can be said in England

on a question which Englishmen are just beginning to consider one can get a faint idea of the general ignorance upon the subject.

"The subject of this paper is essentially common-place in character, and I propose to treat it from a practical side.* It would be difficult, I should say, to say anything new on so trite a question, and I have simply endeavored to indicate what is practical. The term 'commercial education' includes two things: the education which should be given to boys who leave school at the age of fifteen, and the education of boys remaining at school until seventeen years of age who are intended for a life of business. The special difficulties of commercial education do not occur in what has hitherto passed for secondary education; the criterion of which has been a fitness in the subjects taught to open up the minds irrespective of practical utility.

"Classical, mathematical and scientific men may argue as to which of their subjects is the best, but they have a common ground of reasoning in the wish to develop the powers of the mind. The commercial man seeks what is of use; he wants, if possible, a trained product, but the product must be an immediately useful product as well.

"The cry for commercial education is essentially a cry for general, as distinguished from special education. On that ground, if on no other, I welcome the cry and believe that it will tend to raise the general level of intelligence. There is no antagonism in it to the pursuit of classical studies, where time and circumstances permit, and there would be much to be regretted if the classical schools of England were to lose all control over this species of education. Nothing but good can come of the maintenance of the old and the new in one school. A commercial school, dealing only with commercial boys, would gradually become more and more commercial in character; a training absolutely sacrificed to immediate utility, and boys thus taught would completely lose touch with the highest education given in the country."

3.

Quotations from an address, delivered by request, to the members of the Glasgow Local Association of the Educational Institute of Scotland, Saturday, seventeenth of March, 1888. By W. G. Blackie, Ph. D., LL.D. Ex-Lord Dean of Guild. Blackie & Son. Edinburgh, 1888. Pp 52.

I have been requested to deliver an address to the members of the Glasgow Local Association of the Educational Institute of Scotland on the very important subject of Commercial Education, and have great pleasure in now complying with that request. Until quite recently no one would have thought of preferring such a request to any one; and that for the simple reason that no one took any special interest in the education of those who were destined to be engaged in commercial pursuits. Public provision had been made for the education of clergymen, doctors, lawyers, teachers, of those to be employed in the applications of ornament in manufactures, and also of those proposing to devote themselves to scientific pursuits; but it was not thought necessary to provide any special educational course for training one of the most numerous as well as most important classes of the community—that to which is intrusted the carrying on the commerce of this great empire. In short, in a country which is commercial above all the countries of the world, whose relations in trade with foreign countries are more extensive than those of any other country in existence, and whose very

* Thirteen Essays on "Education" by members of the Thirteen. London: Percival & Co., 1891. Essay No. 5.

life and prosperity depend in a very large measure on the success of its foreign trade, the public mind had never awaked to the necessity of providing public means for the educational training of those through whose exertions and mental capacity alone this success could be ensured.

Out of this condition of careless indifference, so little creditable either to our educationists or our merchants, the country has been effectively roused by evidence which cannot be gainsayed and which it would be folly to neglect. It has been discovered that in our counting-houses at home, on account of defective education, our native clerks are being superseded by foreigners, and that in many parts of the world our trade is being diminished—such diminution being caused solely by the superior education of foreign merchants, more especially German, as compared with our own.

The evidence referred to has been obtained through the reports of British and of foreign consuls, the reports of the commissioners on the Depression of Trade and on Technical Education, and the investigations of the London Chamber of Commerce.

In the report on Technical Education it is said (97): "In this matter of education we seem to be particularly deficient as compared with some of our foreign competitors; and this remark applies not only to what is usually called Technical Education, but to the ordinary commercial education which is required in mercantile houses, and especially in the knowledge of foreign languages."

The chairman of the commission on Technical Education, Sir Bernhard Samuelson, Bart., addressing Viscount Cranbrook, said, "That English commercial men were ashamed to find that German clerks coming to this country were able at once to take positions superior to those of English clerks serving in the same office."* The London Chamber of Commerce found, through replies given to questions circulated among mercantile houses, that "ninety-nine per cent of the Englishmen who take to commercial life are alleged to have no serviceable acquaintance with French and German. Consequently employers who have dealings with foreigners are compelled to hire strangers able to write and read the languages of their correspondents. They find their other qualities such as render them serviceable inmates. A German clerk * * * is generally intelligent and well instructed in other than purely commercial subjects," and has "a higher average of mercantile intelligence all round."†

These are the opinions of British merchants regarding the state of commercial education at home. Whether expressed by the chairman of the Commission on Technical Education or through the London Chamber of Commerce, they are of the gravest import, and call for much serious reflection. It may be well, however, also to glance at a foreign mirror, and see what it will reveal on the same subject. A German trade journal‡ says, "Where the individual English clerk is pushed out of an occupation by his German rival he has only himself to blame. The fact must be ascribed to the defective commercial knowledge of the Englishman, or, if traced to a still remoter origin, to the singularly inefficient character of English education. * * * Handicapped as the young Englishman is in London when starting in commercial life, his position is not much better when he makes his début as a trader in foreign countries. According to a host of reports

* The *Daily News*, March 22, 1887. Report of a deputation which waited on Viscount Cranbrook, president of the council, to urge the necessity of government action with regard to technical and commercial education.

† *The Times*, thirteenth of July, 1887.

‡ *Kühlow's German Trade Review*, Berlin, quoted in the *Financial Reformer*, October, 1887.

emanating alike from British and other consuls the development of German and decline of English trade is not so much to be ascribed to the superiority of German goods as to the greater sharpness and activity of German traders."

On one point I would differ from the opinion expressed by the writer of these sentences. I would absolve the English clerk from the responsibility of personal blame for the state of his education, and lay the whole burden of his shortcomings in that respect on what the writer very properly styles "the singularly inefficient character of English education." In this opinion, which is probably intended to apply specially to secondary education, I very thoroughly concur, so far as it applies to the preparation of youths intended for mercantile life.

The educational deficiencies which have been observed do not arise from any want of ability, either in the young aspirants who are qualifying themselves for a mercantile career, or in the teachers under whom they have studied, but wholly from the defective system of secondary education under which the country has too long suffered. Our secondary schools may very well be called preparatory schools for the universities. The university is their goal; by the success of their pupils, or the reverse, in the university course their prestige rises or falls. It is, therefore, quite natural that the course of education in these institutions should be specially directed to meet the requirements of youths who intend to proceed to the university after leaving school. But the prevalent mistake has been to constrain all boys to take this course, whether they intend to enter the university course, or whether on leaving school they propose to go direct into business. This mistaken, though doubtless well-meant course of action, has arisen from the pervading influence in the minds of teachers, and through them in the minds of parents, of the very mischievous fallacy that no secondary education can be of any value unless it includes instruction in the ancient classical languages, or, at least, in the Latin tongue. All culture is believed to be derived from the study of the ancient languages and the classical writers, and attempts to obtain the same end by other means are uniformly poohpoohed and frowned upon; and yet, coincident with this belief, and coincident with this action, boys who do not take a university course are sent out into the world unable to peruse with appreciation the very authors through a study of whose writings alone culture is presumed possible to be obtained.

In the case of boys who do not go to the university, but enter into business on leaving school at the age of fifteen or sixteen, the result of this system of instruction is very well known, and reflects credit on no one. These boys have for five years or more been engaged in the study of the classical languages, and possibly also of one modern language; and when they leave school to go to business they are not found to possess a useful knowledge of any one of them. Had another course been pursued—had these same boys, in place of being drilled in Latin, or Latin and Greek, had their attention turned to modern languages during the whole of their course—they would have been able to write and speak two of them, if their language master was worth his salt. This brings me to notice another fallacy which pervades the public mind, arising doubtless, in some measure, from the one already adverted to, namely, that boys cannot learn continental languages in this country. Those who maintain this opinion must also, at the same time, be of opinion that Scotch boys have not the ability of boys on the continent, for it is found in Germany, Holland,

Belgium, Austria, Switzerland, France, etc., that boys in these countries can learn English without crossing the channel. My own belief is, that whether it be in acquiring a knowledge of the intricacies of grammar or of the art of pronunciation, a Scotch boy, under the care of a properly qualified teacher, will hold his own with any foreigner from the Ural Mountains to Cape Finisterre. Give him the opportunity, and he will show what he can do. In place of constraining him to go through a Latin grind as preparatory to entering upon a mercantile life, say at sixteen years of age, put him into a course in which, in addition to his native English, his time is filled up with modern languages and history, commercial geography, natural history, mathematics, mercantile correspondence and other cognate subjects, and a result will be obtained equal to that which is reached in any continental school of a similar kind.

The question, therefore, which should now receive consideration is not one of relative mental capacity. There is no allegation in any of the reports which have been made, that the youths of Great Britain are in any degree inferior mentally to their compeers on the continent. The question is solely an educational one, and must be solved through educational means. It assumes the aspect of an educational duel between the mercantile population of this country and their competitors on the continent, in which the mastery is sure to remain with those who are the most fully equipped for the contest. It is well to keep this very important fact constantly present in the mind, as it provides a convenient test by which to estimate the value of any educational suggestions that may be put forward.

An instructive confirmation of the position of the educational contest here adverted to is to be found in a report made as early as 1871 and presented to the French Chamber of Commerce by M. Ricard of the Commercial Academy, Prague, which contains the following significant passages: "The strength of our academy," he says, "lies in the practical character of its studies, viz., (1), commercial arithmetic; (2), office work; (3), modern languages; (4), technology of materials; (5), writing. * * * You are right in urging on commercial studies. If French trade does not occupy its rightful place it is from want of the special instruction which ought to precede the practice of any profession.

"Every intelligent man must admit that the invasion of our commerce by foreigners is due entirely to this educational inferiority. The Germans are taking our places everywhere. They even supplant the English. Why is this? Because the teaching of modern languages in Germany is so thorough that 'intelligent emigration' becomes easy and profitable, and commerce is advanced by the young adventurers who go to the end of the world in order to organize agencies for the large markets of Vienna, Prague, Berlin, Frankfort, etc. All these young men speak French and English, as well as their own tongue; if they are going to the Spanish colonies they speak Spanish, and if to China they learn Chinese.

* * * Let the merchants of France take warning in time, German commerce has better instruction, better discipline, and greater enterprise than French commerce; it is at home everywhere—no languages are foreign to it; it keeps a look-out over the whole world; it is not ashamed to go school; and if you do not awake from your lethargy it will annihilate you."*

* Quoted in *Report on Commercial Education*. Pp. 31, 32. Isbister, London.

The picture here drawn by M. Ricard is sketched in very strong colors, but not stronger than the dangers of the occasion demand, for their influence on British as well as on French commerce is of a very threatening description, and one which it behooves us, with all our energy, to seek to counteract. What means should be taken to effect this desirable end may be considered with greater advantage after we have taken a general view of the means by which the forces marshaled against us have been prepared for the commercial battle of the world.

* * * * * * * *

Meantime let our secondary schools establish a commercial course parallel to the classical course which usually forms the main feature in these institutions. That much can be accomplished by the governors of these institutions if they are so minded. Some private schools have already taken up the subject and made good provision for it. The Glasgow and West of Scotland Technical College proposes to institute a commercial course, and the Glasgow Athenæum, through its evening classes, offers useful opportunities for preparing for mercantile life. But it would be well if we had in addition in Glasgow, at least one fully equipped commercial school analogous to one or other of the high schools in Germany to which reference has been made, presenting in addition to a proper curriculum of several years, one of one year, which might be resorted to by those who have taken a degree in the university, and desire before entering business to equip themselves fully for the important walk in life which they propose to follow. This institution would be a model to others, and by the gifts of our merchants would soon be in possession of a teaching collection of commercial products of the greatest value and the most varied description. Let us also seek to impress business men, young and old, with a lofty conception of the educational requirements of the class to which they belong. Their needs are as great as those who belong to the learned professions, and why should their aims be lower? With properly directed effort they may reach an educational platform equally high and attain a reputation of equal value. The following well-conceived remarks on this very important question will form an appropriate conclusion to this address:

"He whose early education has been properly directed will make more progress in commercial experience in six months than will be made in several years by another without such preliminary training. This is more especially the case in our time, when the extension given to commerce and industry has multiplied and varied our commercial transactions to such an extent as to elevate to a veritable science that which was considered as only a common matter of every-day knowledge. In fact, in these days, it is necessary that a merchant should be highly educated if he wish to retain an elevated position in the commercial world. * * * It is very difficult to acquire a complete knowledge of the many commercial technicalities of the present day. The knowledge required in dealing with raw material is not acquired in a day, and an acquaintance with modes of production, manufacture, treaties of commerce, commercial geography, custom-house regulations, and maritime questions generally, are all subjects which demand much careful time and study. Without a knowledge of all these the merchant is condemned to move in a restricted sphere, not being able, without danger, to give a wide range to his operations, and not daring to create, in foreign countries, those branch establishments which are often

the means of his successful establishment. * * * It can be safely asserted that true commercial education has been left too long in a state of neglect. * * * Men have seemed to imagine, that in order to prosper, commerce and industry have only required money and favorable treaties of commerce. Governments have occupied themselves with the material side of the future merchant, without taking care to develop his intellectual capacity, which is, indeed, the spirit of his operations; without taking care to improve his intelligence, which is the germ of enterprise in the commercial life of a nation."*

4.

A brief report on Commercial Education in England, between 1887 and 1891, with suggestions for its future development, from Mr. J. J. Findlay, M. A., late Head-master of Wesley College, Sheffield, to the Sheffield Chamber of Commerce.

1. The comments I have to offer date from the Report on Commercial Education prepared in 1886 and 1887 at the request of the late Samuel Morley, and presented to the Associated Chambers of Commerce in 1887. Following upon this report, the Commercial Education Committee, appointed on December 14, 1887, drew up a scheme of education, and subsequently made arrangement with the College of Preceptors and with other examining bodies for schemes of certificates.

I propose to show that, while the report of 1887 affords most valuable guidance as to the lines which we, in England, should follow in order to improve commercial instruction, the arrangements for examinations and certificates, which have followed therefrom, are wholly inadequate, and indeed are contrary to the spirit and method of German Commercial Education.

2. *Causes of the success* of German Commercial Education.

The main impressions that we gather from the report, as to German schools, may be summarized as follows:

(*a*) That Germany has been engaged on this work of Commercial Education *for fifty years*, and has, during that period, gained an amount of skill and experience in this kind of instruction to which we have no parallel in England. Commercial instruction, like any other special calling in life, is a highly technical and difficult task, and it is only in a long course of years, and by the help of many workers in different centres that the Germans have arrived at their present stage of perfection. This applies, in a less degree, to France, where a great impulse has been given, in this as in many other directions, by the awakening which followed the political disasters of 1870.

(*b*) That, while the Germans have, for many years, given this attention to commercial instruction, they have attached far more importance to the foundation of *good general education*, before the age when specialization for commerce is begun. Thus, I was informed by Dr. Carl Wolfrum, the principal of the famous Mercantile Institute of Leipsic—which I have visited very recently—that no one can be admitted to enter upon these special commercial studies who has not passed with credit through the Modern Schools of Leipsic, or can give evidence of having attained a proper standard at some other place of *general* education. A very slight acquaintance with German

* Report on the foundation, organization and progress of the *Institut Supérieur de Commerce* of Antwerp, from its institution by Royal Warrant, in 1852 up to the present day; prepared on the occasion of the International Exhibition in Liverpool, 1886.

education makes it evident that their success at the present day in technical and commercial knowledge is *almost wholly due* to the fact that a *sound general* education has been enforced throughout the country since the beginning of the present century.

(*c*) The institutions in Germany for Commercial Education (all founded and maintained by chambers of commerce) are, speaking generally, supported, managed, examined, and even taught *by practical commercial men*, who have or have had some *real knowledge at first hand* of what the commercial world needs. For example, the teacher of English,* under Dr. Wolfrum, at Leipsic, is an experienced teacher, but he would never have been permitted to hold this post merely on the ground of his scholarship: he had had the good fortune to have spent some years in a banking house before he turned his attention to education, and this experience has qualified him to teach English in a Mercantile School. So with the majority of the teachers: they have either had some actual business experience, or *they have received their training* in the best Commercial Institutes of France and Germany, and thus they learned what is required under the guidance of experienced men, and in close contact with the managers of these institutions—men holding distinguished positions in the commercial world.

3. Action of the Chamber of Commerce Committee in 1888.†

With this report before them, and with such facts as these presented to their notice, what action did the Chamber of Commerce Committee take?

They (1) issued a scheme of education‡ with a detailed list of studies which might be pursued from year to year. This in itself was useful, but a paper scheme of what might be done, if any one can be found to do it, does not take us very far.

But (2) they adopted measures for which the example of Germany and of France offer no warrant, and which, indeed, are opposed to the whole spirit and method of German education. They *instituted examinations* for certificates, and offered a large number of scholarships and prizes. Here again, a scheme of examination on paper is not harmful in itself, but unfortunately it has done great harm in practice, because it was supposed to satisfy the requirements of the case. Sir Albert Rollit said, "The machinery of commercial education was not only ready but in action." The committee in London, and the examining bodies with whom they co-operated, seemed to suppose that, when these regulations were drawn up, and when all the apparatus of examining and of awarding prizes were set on foot, that their duty was at an end, and that some one else—the schoolmasters or parents—must do the rest.

It is one of the great misfortunes of English education that we seem to place all our reliance upon certificates and examinations. I am writing with full knowledge of this subject, having prepared classes and pupils for almost all the current examinations in the country. Such examinations schemes are *simply useless* for the practical purpose of assisting English commerce by improved instruction.

* Mr. Montgomery, formerly in a Banking House in Belfast.

† See speeches of Mr. A. Forster and Sir Albert Rollit, at London Chamber of Commerce Annual Meeting at Hotel Metropole, in 1888, (as reported in the Sheffield papers at the time).

‡ Scheme for Commercial Education, adopted by Associated Chamber of Commerce, twenty-fifth of September, 1888.

4. Failure of the Examination and Prize Schemes.

There is no question that, *as a matter-of-fact*, the schemes have failed. A few schools, such as King's College School, London, have reorganized their upper form in order to meet the requirements of the scheme—a few candidates here and there have offered themselves for the certificates and prizes, but it has been a matter of public comment in the press that the new Commercial Regulations issued by the "Joint Board," the Cambridge and Oxford "Local" delegates, and by the College of Preceptors, have practically produced no change in the condition and practice of secondary schools.

It may be said that we have not yet had time to estimate the effect of these schemes; but unfortunately there seems to be no prospect of their meeting with an *increase* of support, as one year succeeds another.

5. *Causes of Failure.*—The arguments which account for the success of German education, which I have detailed in 3, will go far to explain the failure of the present schemes in England.

(*a*) In England we have at present *no competent teachers* of commercial subjects, to teach with any success the special kinds of instruction required; for commerce needs experience and knowledge, *quite different* from that of the ordinary schoolmaster. *You cannot produce results without teachers.*

There are a fair number of English young men who have entered the Leipsic and other German Commercial Institutes and their condition—their lack of proper grounding—is very conspicuous, when placed side by side with German boys of the same age.

(*b*) We are proposing, teachers or no teachers, to give special instruction to boys who have *no proper foundation* in good general education. *It is waste of time* to apply special commercial training to young men who have not learned in their earlier years the elements of good general knowledge—in arithmetic, the English language, geography, and modern languages. Far better to let them take their chance in business and get on as best they can in the office, using their native English enterprise and shrewdness, rather than to keep them working for certificates for which they have no *grounding* in their earlier years, and for which, as things are at present, English schools cannot provide competent instructors.

(*c*) The chambers of commerce, after taking up this matter as their own concern, have only gone half way and have left the most serious part of the work—the actual organization of commercial instruction—to be done by others. If they followed the example of Germany, they would *themselves organize* this special instruction which they demand—they would themselves see that teachers were found to impart it—and they would themselves supervise any sort of examination that might be necessary, instead of leaving it in the hands of professors and lecturers, who are wholly ignorant of the requirements of the case.

One of the most capable English teachers in this department is Dr. Wormell, Head-master of the well-known City Middle Class School in London. His contributions to the educational queries two years ago, showed very clearly the defects of the examination scheme, which Professor Ware (Doctor of Divinity at King's College) had prepared for the London Chamber of Commerce.

(*d*) Instead of following the German example, a paper examination has been established, and the schools of the country, which at present have neither teachers nor appliances at all adequate to meet the case, have been desired to send up candidates. The result has been to *cram* a few boys with knowledge gained out of correspondence, textbooks, and, perhaps, in one or two schools, to produce some really useful teaching. Clearly, the examination must be the *end* and not the beginning of a new plan of instruction. The cart has been put before the horse. Prizes and certificates have all been arranged before there was any provision for teaching!

6. New prospect opened by the *Technical Instruction Act.* Before stating the suggestions which I have to offer, I wish to point to the work now being done by various county councils, as indicating the right solution of the problem. And here let me observe that the phrase Technical Education, as defined in the act, covers the whole ground of Commercial Education,* and, if in Sheffield, the Chamber of Commerce should take steps to secure efficient instruction for commercial life, they could properly appeal to the Technical Instruction Committee for a grant in aid.

The County Councils have recognized that improvement in teaching depends upon the *improvement of the teacher*, and classes are therefore being instituted in many branches of technical pursuit to *train teachers* to impart their knowledge. They are offering, up and down the country, many scholarships—but they are not of the nature of prizes, which the winner may put into his pocket, but they are to assist the winner by sending him to some place of higher technical education where he may qualify himself better for the service of his country in technical industry.

7. My suggestions, which I make particularly with reference to Sheffield, but which will apply to any large commercial centre, are as follows:

(*a*) With reference to the *general* education of boys in secondary schools—up to the age, let us say, of fifteen;—what could a Chamber of Commerce do? I think it has a right to inquire, in any possible way, as to the success or failure of the schools in its neighborhood. It ought to know, *e. g.*, whether such schools teach arithmetic and elementary mathematics with any success. Whether boys intended for commerce still continue to waste their time on Latin or Greek. Whether such boys make a proper start with French and German. And whether they secure some intelligent acquaintance with the elementary facts of chemistry and physics, which are of essential importance as a foundation for the knowledge of goods, of machinery, and of general business in later life.

I do not suggest that the Chamber of Commerce should itself institute these inquiries, and certainly I do *not* want it to establish another paper examination; but there are many ways of conducting such inquiries, and I certainly think that the Chamber of Commerce would do well in association, perhaps, with the Technical Instruction Committee of the town council, and with the help of Firth College in seeking information as to the actual state of instruction in the private and the endowed schools of the town.

(*b*) Beyond the period of *general* education comes the period when a boy should obtain *special* instruction in commercial subjects

* Technical Instruction Act [52 and 53 Vict.] s. 8. The expression "technical instruction" includes "modern languages" and "commercial subjects."

proper. If he is a poor boy, he must get this, as is done everywhere in Germany, in early morning or late afternoon classes.

If his parents are more wealthy and can afford to keep him at school after he is fifteen years old, he ought to enter either a special mercantile institute, or a special mercantile department (of a secondary grammar school, or of a university college).*

Now, I have tried to show that no such mercantile institute or department can possibly be established until properly qualified teachers are created. I affirm that we have not got them in England. Half an hour spent in inspecting the work done in the institute at Leipsic was sufficient to convince me that we know nothing of it in this country at present, and we might as well invite the masters in our secondary schools to come into our merchants' offices and manage our business for us, as expect them, at a moment's notice, to undertake the work that is being done in the mercantile institutes abroad.

I argue, therefore, that the one practical step which our Chamber of Commerce ought now to undertake, is to provide properly qualified commercial teachers. I talked with Dr. Wolfrum and with one of his assistant masters upon this topic. He entirely agreed with me, and said that if any English teacher, a sensible man, with some knowledge of what business means, were sent over to study in the Leipsic Institute—or to a similar commercial institute in Paris, or Antwerp, or Vienna, he would learn in a year, or in eighteen months, how to conduct commercial classes, and might return to England and organize effective teaching here. He would learn, for example, how to teach commercial history and commercial geography—which is quite a different matter from the ordinary geography which we now teach—he would learn counting-house work, a knowledge of the *Articles of Commerce* (a most important subject, the acquirement of which is of the greatest assistance to Germans in extending their business), and he would, of course, learn the modern languages in a practical fashion.†

And more than this, he would *learn the business of commercial education* in the only way that a man can learn any business, by actually going into it and getting training in the places where it is well done.

8. I therefore offer, as a practical suggestion, that the Chamber of Commerce in Sheffield provide a suitable scholarship of perhaps £150 or £200, and select a suitable candidate to be sent to some well-known commercial institute on the continent. The candidate should be a young man with some culture and experience in teaching, but also with some practical acquaintance, if possible, with commercial life. I suppose it would not be difficult to place him under engagement to teach after his return in Sheffield under the direction of the Chamber of Commerce. He would be then qualified either to organize evening classes for apprentices, or to establish a commercial department in some institution like the Grammar School or Firth College. But I ought to repeat that even then nothing like the results obtained in Germany can be expected, unless the earlier *general* education is also improved.

* I asked Dr. Wolfrum how they secured commercial teachers in Germany. He said, "We have to create them ourselves, and it has taken fifty years to do it."

† I venture to assert that there are not ten English schoolmasters competent to teach the fundamental subjects of the Commercial High School; and how can we be expected to prepare pupils to pass examinations in them.

This proposal involves considerable expense, but this is to be expected. The German Merchant Guilds have been supporting commercial education, with their purses as well as with their interest, for fifty years, and we may fairly expect that English merchants will not be behindhand with gifts of money when they see that some fair return may be expected for their outlay. One-tenth of the money which Sheffield manufacturers have spent in technical education would suffice to give adequate support to commercial education in this town.

Finally, let me urge again that any such scheme will depend for success not upon prizes or certificates, but upon the actual *teaching ability* of the men employed. I should urge that, if the enterprise be undertaken, those who conduct should follow not only the continental methods of instruction, but also of examination and inspection. I need not trouble you with suggestions under this head at present, except to recommend that the English Examination Board, with its hampering machinery of certificates and prizes be disregarded. If managers and teachers both have a real interest and knowledge of this work of commercial instruction, the pupils will have sufficient stimulus to industry and will be themselves the best judges of the work done in the commercial classes.

9. Can we improve upon German methods of commercial instruction? I wish to anticipate one objection to the views which I have endeavored to express in this paper. It may be said that we are too fond of quoting Germany as an example, and that we ought to improve upon their plans. I reply:

(1) That I am simply arguing upon the report of 1887 which was adopted by the chambers of commerce, and has been presented to the English public by English merchants, a proof of the superiority of German commercial education.

(2) It is quite true that German methods are not perfect, and I am not at all disposed to exaggerate the importance of education for commercial success: Education by itself will never make a successful business man. But the report of 1887 shows us how the Germans have conducted commercial education with success during many years, and if we wish to achieve their success, we must study their methods. I approve these methods and I approve of the report of 1887, not only because they have helped to develop German commerce, but because they are founded on true principles of education, and of sound common sense.

November, 1891. J. J. FINDLAY.

5.

Letter from Dr. Carl Wolfrum to the Secretary of the Sheffield Chamber of Commerce.

DEAR SIR:—I have received and read with great interest your letter respecting the consideration, by your Chamber of Commerce, of the means to be adopted in order to furnish suitable technical training to youths destined for a mercantile career. Mr. Findlay has treated the question in his report with such complete knowledge of the matter, that it only remains for me to second the opinions he has formulated, and express my conviction of their accuracy and aptness. Mr. Ducommun's report is also excellent, and appears to be the result of his personal investigations. The plan of studies annexed to the latter seems to me, however, to admit of some expedient changes. My experience would lead me to

regard the following axioms as essential to a proper solution of the question, viz.: That technical instruction should not begin before the fourteenth year, and must be preceded by a sound general education; that the committee would be called on to decide what degree of general instruction can be reckoned on in an English boy of that age, and that to this the first year study plan of the commercial school must be adapted. The instruction given during this year must aim at rendering the pupil's knowledge more complete and uniform before introducing them to entirely new subjects. In our establishment the only technical subject taught during the first year is Mercantile Arithmetic; the other subjects being German, French, and the Elements of English, Geography, Algebra, Geometry, Writing and Drawing. The special commercial training only begins with the second year, as it demands a certain ripeness of the intelligence which we can hardly expect to find in even a talented boy of fourteen. The later the technical instruction begins, the better are the results obtained. The greatest service the Chamber of Commerce could render the cause of commercial education in England would be to bring home in some way or other to English parents the fact that a boy can no more be prepared out of hand for business life than for any other calling. The requisite knowledge cannot be pitchforked into him within a year or eighteen months, and no effectual training is possible when a sufficient time for its proper evolution cannot be reckoned on.

In no country do we so often meet as in England the delusion that a language, for instance, can be learned within a few months, and that the other requisites for a worthy commercial career may be best acquired in actual business. A true commercial training requires time—and once again, time.

Apart, moreover, from all the incontestable advantages of a thorough preliminary special education, there are other considerations which render it undesirable that a youth should plunge into practical business life before his eighteenth year. It is, for instance, a recognized fact that the understanding and spirits retain through life a greater elasticity and energy when a youth is not overburdened at an early age with the routine and cares of his calling.

The "Commercial Office" referred to in Mr. Ducommun's report has been abandoned everywhere, I believe, in Germany and Austria. In America, the operations are confined to the most insignificant trifles; and I think that, on due consideration, such "playing at shop" will be found to be unscientific and overdone; and the practice presupposes an experience and technical knowledge which the pupils cannot possibly possess. It is neither good school nor good office work. In our institution groups of pupils do not carry out with other groups of pupils such imaginary transactions as may happen to please them. Every pupil performs independently, and in accordance with the principles and models furnished him, the whole series of connected operations arising out of the various species of commercial dealings, after the matter has been thoroughly explained and illustrated by the teacher. This suffices to instil an accurate knowledge of the routine of such operations, together with a clearer conception of general principles, than can otherwise be obtained. What remains to be learned may safely be left to practical life.

It must further be recollected that such training as we are speaking of is never so effective after the entry into actual business life. The classes

for apprentices, therefore, should be, as with us, destined only for such youths as intend to confine their attention to the lower walks of commerce. It is, moreover, of the utmost importance that these classes should be held at suitable hours, even should they trench on those generally devoted to business. In this institution they take place between seven and nine a. m. or two and four p. m. Instruction at night when both mind and body are weary with the day's work, is inhuman and worthless—harassing alike to pupils and teacher. There are still, unfortunately, schools in Germany where the instruction is given at night, but their example is not a desirable one for England.

With reference to the creation of a suitable teaching staff, I have already expressed myself on that subject to Mr. Schott. The gentlemen proposing to undertake this branch of education must not shrink from devoting a certain time to practical work in approved business houses before beginning to teach. They will thereby acquire, too, a far higher conception of their task, and experience a proper pleasure in its worthy accomplishment.

With sincerest wishes for a successful issue to the efforts of your respected corporation, I remain, dear sir, yours very truly,

CARL WOLFRUM, Director.

Leipsic, 15th March, 1892.

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INDEX.

Academies, Commercial, establishment of, in Austria, 1, 2
Academy, Commercial, of Prague, 34, 52
of Vienna, 3, 34
Accounting, 140, 141
Acland, A. H. D., and Smith, H. L., work on "Studies in Secondary Education," by, 207
Aimé-Girard, M., 57
Algebra, arithmetic and geometry, 143, 144
American Bankers' Association, committee on schools of finance and economy of, executive council of, ii
efforts of the, xv
promotion of sound financial education by the, xxi
Antwerp Superior Institute of Commerce, 168–186
administration of the, 180
alumni association of the, 182–186
council of improvement of the, 180
diploma of the, 178, 179
discipline at the, 180
entrance examination for the, 171
examinations at the, 176–178
faculty of the, 181
foundation and development of the, 168, 169
general considerations regarding the, 181, 182
government of the, 170
inspection of the, 180
matriculation at the, 170, 171
observations on the instruction in the, 175, 176
program, methods, distribution of the time at the, 171–175
receipts and expenses of the, 181
scholarships of the, 169, 170
statistics of the pupils at the, 169
subsidies to the, 169
traveling scholarships of the, 179, 180
vacations at the, 171
Apprentice system, old, break down of the, xvii
Arenz, K., address of thanks to, by the Commercial Council of Prague, 42, 43
quotations from the address of, 37–41
Arithmetic, algebra and geometry, 143, 144
Art, collection to illustrate the history of, of the Vienna Commercial Academy, 29
Austria, curricula of higher commercial institutions in, 2
establishment of commercial academies in, 1, 2
general remarks on commercial education in, 51, 52
higher commercial instruction in, 1–52
schools in, xix.
history of mercantile instruction in, 1, 2
influence of the establishment of the Commercial Academy of Prague in, 41
principal commercial institutions of, 3–52
regulation of commercial instruction in, 2
Authorities, list of, consulted, 220–223
Aymerick, Dr., on methods of training, 164

Baccalaureate pupils, 133
Bachelors, 131
Bachheibl, J., 35
Belgian University of Commerce, 168
Belgium, disregard for commercial instruction in, 181
higher commercial instruction in, 168–186
population of, 182
traveling scholarships in, 127
Blackie, W. G., quotations from an address on commercial education by, 208–213
Blanche, A., 66
Blanqui, A., 55, 56
Bohemia, address to the merchants of, for the establishment of a commercial school in Prague, 35
Bordeaux, Philomathic Society of, subsidies to, 127
superior school of commerce of, 125, 126, 136, 137
Brodard, M., 53, 55
Buildings, pictures of, ix–xiv

Busch, establishment of an Academy of Commerce in Hamburg by, 157
Business classes, social estimate set on the, in Europe, xix
failures in, xviii
Butler, George A., ii
Buying and selling, art of, 147, 148

Cambridge, examination for commercial certificates at, 200
Certificates, 67, 87, 198–207, 214
Chaptal, M., 55
Chrudim, commercial academy in, 2
Coe, George S., ii
Coins, collection of, 27, 28, 47
Colleges, commercial, xv
Commerce, Academy of, in Hamburg, 157
chambers of, in Saxony, 156
development of, 195
German, demoralization of, 152
history of, 151
oblige, 73
science of, 63
Special School of, at Paris, 53
Superior Institute of, at Antwerp, 168–186
School of, at Bordeaux, 125, 126, 136, 137
at Havre, 125, 126, 127, 136, 137
at Lyons, 125, 126, 127, 136, 137
at Marseilles, 125, 126, 136, 137
at Paris, 53–75
at Rouen, 125, 126, 127, 136, 137
at Venice, 187–193
Commercial academies, establishment of, in Austria, 1, 2
Academy of Vienna, 3–34
of Prague, 34–52
and industrial economy, 142
equipment, study of, 146, 147
excursions, 65
geography, 145, 146
technology, 147
visits, 154
and technical education, 195
certificates, 198, 207
examination for, at Cambridge, 200
at Oxford, 200, 201
papers set in examination for, 201–207
scheme of subjects of examination for, 199, 200
colleges, xv
education, adequate reason for, in the United States, xxi
German, causes of the success of, 213, 214
in Austria, general remarks on, 51, 52
in England, xx
Commercial education, notes on, 207–220
report on, by J. J. Findlay, 213–218
in Europe, xv–xxi
inadequacy of the gymnasium and real school to supply, 34
need of, 34
quotations from an address on, by W. G. Blackie, 208–213
remarks by A. T. Pollard on, 207, 208
high school, advantages of a, xviii
curriculum of a, xxi
high schools and schools of finance and economy, desirability of, xvi
method of organizing, xvi, xvii
Institute, establishment of a, by the Leipsic Merchant Guild, 34, 35
Public, at Leipsic, 156–167
institutions, principal, of Austria, 3–52
instruction, advantages and need of, xvii
criticism of, in Italy, 192
development of the moral qualities by, 139
disregard for, 181
higher, in Austria, 1–52
in Belgium, 168–186
in England, 194–220
in France, 53–155
in Germany, 156–167
in Italy, 187–193
spirit of, in France, 136, 137
utility of, 183
law, 150, 151
morality, 153, 154
schools, best time of life for students to enter, 41
higher, of France, comparison of the programs of the, 135–137
in Holland, xx
in Russia, xx
of France, age of admission to the, 131
appeal to establish scholarships in the, 129, 130
comparative table of expenses of the, 135
constitution of the, 125
councils of the, 125, 126
critical examination of the actual programs of study in the, 140–155
diplomas of the, 134
duration of studies in, 130, 131
foreign pupils at the, 133
groups of, 125
notes on the, 125–155
number of pupils at the, 131–133
professors in the, 134
resident pupils, half-boarders and day pupils at the, 133

Commercial schools, rewards in the, 133
scholarships of the, 126
status of bachelors in the, 131
subsidies to, 126, 127
traveling scholarships of the, 127–129, 133
organization of, 38
purpose, function and need of, 37, 38
sciences, licentiates in the, 178, 179
studies, higher, discussions on, 76, 77
questions regarding, 77
School of, at Paris, 75–124
training, xix
Conference Adolph Blanqui, 75
Conferences, 150
Cunin-Gridaine, M., 60
Curriculum, xxi, 4, 5, 6, 12–19, 36, 44, 45, 84, 160, 161
Czedik, A., 6

Dechamps, M. A., 168
Deligny, M., 74, 75
Denière, M., 57
Déodati, E., 187
Desgrands, M. L., monagraph by, 77
Detre, N., 74
Dietz-Monnin, M., 88
Diplomas, 67, 87, 134, 178, 179
Drasche, E., 3
Drawing, 151
Ducommun, Mr., report of, 218
Dupui, C., 55
École Blanqui, 56
Economy, commercial and industrial, 142
political, 151, 152
private, 142, 143

Education, adequate commercial, reason for, in the United States, xxi
commercial, in Austria, general remarks on, 51, 52
in England, xx
notes on, 207–220
report on, by J. J. Findlay, 213–218
inadequacy of the gymnasium and real school to supply, 34
need of, 34
quotations from an address on, by W. G. Blackie, 208–213
remarks by A. T. Pollard on, 207, 208
German commercial, causes of the success of, 213, 214
mediæval idea of, xvii
professional need of, xvii
sound financial, promotion of, by the American Bankers' Association, xxi
technical and commercial, 195
Educational system, first aim of an, xviii
Elocution, 150
England, backwardness of commercial instruction in, 194, 208, 209.
cause of educational deficiences in, 210
England, commercial certificates in, 198–207
education in, xx
notes on, 207–220
higher commercial instruction in, 194–220
opinions of merchants regarding the state of commercial education in, 209
papers set in examination for commercial certificates in, 201–207
technical instruction act in, 216
Europe, commercial education in, xv–xxi
influence of the military system in, xx
social estimate set on the business classes in, xix
European schools, character of, xix
Examination and prize schemes, failure of the, 215, 216
Examinations, 60, 61, 66, 67, 85, 86, 171, 176, 178, 191, 199, 207, 214
Exercise, bodily, 154

Feller, Dr., 158
Finance and economy, desirability of schools of, xvi
and economy, schools of, committee of executive council, American Bankers' Association on, ii
Wharton school of, xv
Findlay, J. J., report on commercial education in England by, 213–218
Florence, superior institute for philological and philosophical studies at, 187
Focillon, M., 78
France, commercial schools of, notes on the, 125–155
disregard for commercial instruction in, 181
higher commercial instruction in, 53–155
schools in, xix.
regulations relating to traveling scholarships in, 128, 129
spirit of commercial instruction in, 136, 137
Frary, M. Rauell, on geography, 145, 146
French commercial schools, increase in attendance at, xix.

Gage, Lyman J., ii
Gariel, Dr., 66
Garnier, J., 56, 73, 193
Genoa, naval normal school at, 187
Geographical cabinet of the Vienna Commercial Academy, 28, 29
Geography and statistics, importance of, 40
industrial and commercial, 145, 146
Geometry, arithmetic and algebra, 143, 144
German commerce, demoralization of, 152
trade, advance of, 197
Germany, higher commercial instruction in, 156–167

Germany, higher commercial schools in, xix
superiority of commercial schools in, 211
theoretical versus practical instruction in, 164, 165
Gervais de Caen, M., 56, 57, 75
Geyer Commercial School, 2
Glasser, Prof. Book, on "Commercial Education in Austria," by, 52, 156
Gotha, school for apprentices in commercial houses in, 157
Grandgaignage, M., letter from, 129, 181
Gratz, commercial academy in, 2
Grelley, M. J., 58
extract from an address of, 72, 73
Guibal, M., 76
Gymnasium, inadequacy of the, to supply commercial education, 34

Halla, J., 35
Hamburg, Academy of Commerce in, 157
Hammer, C. L., 157
Hauke, F., 6
Havre, superior school of commerce of, 125, 126, 127, 136, 137
Hielard, M. L., 88
Holland, commercial schools in, xx
Hornbostle, T., 3
Huette, M., 76
Huret, M., 89

Industrial and commercial economy, 142
equipment, study of, 146, 147
excursions, 65
geography, 145, 146
technology, 147
visits, 154
Innspruck, commercial academy in, 2
Instruction, commercial, advantages and need of, xvii
commercial criticism of, in Italy, 192
development of the moral qualities by, 139
disregard for, 181
utility of, 183
distribution of subjects of, 20–27, 48, 64, 160, 174
higher commercial, in Austria, 1–52
in Belgium, 168–186
in England, 194–220
in France, 53–155
in Germany, 156–167
in Italy, 187–193
means of, at the Prague Commercial Academy, 47
method of, in the Prague Commercial Academy, 43
mercantile, history of, in Austria, 1, 2
observations on the, in the Antwerp Superior Institute of Commerce, 175, 176
organization of the, at the Prague Commercial Academy, 46, 47
public, in Italy, law reorganizing, 187
Instruction, theoretical and practical, relative value of, 137–140
Italy, criticism of commercial instruction in, 192
higher commercial instruction in, 187–193
law reorganizing public instruction in, 187

Jacquemart, M., report of, on traveling scholarships, 127, 128
James, E. J., addresses of, xv
invitation to, to visit Europe, xv, xvi
Jourdan, M., 88, 89

Kindt, M. J., 180
Krakau, polytechnic institute in, 2

Laboratories, 28, 29, 47
Lafitte, J., 55
Lafitte, P., 73
Language, French, 148
Languages, foreign, 149
Law, commercial, 150, 151
school, training of a, xviii
Le Coeuvre, M., 66
Le Roy, René, 75
Léautey, remarks on the Institute of Leipsic by, 164
Lectures, list of, 8, 9
Legislation, 150, 151
Legret, M., 53, 55
Leipsic Merchant Guild, 156
establishment of a commercial institute by the, 34, 35
Public Commercial Institute at, 156–167
admission to the, 159, 160, 161
apprentice department of the, 159, 160, 162
changes in the curriculum of the, 165, 166
curricula at the, 160, 161
extract from the report of the Director of, 162–164, 166
government of the, 159
professional course of the, 161
program and methods at the, 164–167
provisions relating to the various departments of the, 159–164
purpose of the, 159
receipts and expenses of the, 167
second or higher division of the, 160, 162
statistics of pupils at the, 159
tuition at the, 160
Lemberg, Polytechnic Institute in, 2
Leyasseur, M., 66

Library of the Vienna Commercial Academy, 29
Licentiates in the commercial sciences, 178, 179
Linz, commercial academy in, 2
Liverpool College, 207
Institute, 207
London Chamber of Commerce, scheme of subjects of examinations, issued by the, 199, 200
Loos, M., 168
Lowry, Prof., 207
Lubbock, Sir J., 194
Luzzati, L., 187
Lyons, National Society of Education at, questions regarding higher commercial studies proposed by the, 77
superior school of commerce of, 125, 126, 127, 136, 137

McMichael, Morton, ii
Magne, M., 60
Magnus, Sir P., on mercantile training, 194
Manufacturer, position of the, after the French revolution, 183
Marchand, L., 55
Marine equipment, 148
Marseilles, Superior School of Commerce of, 125, 126, 136, 137
Matthyssens, Dr., monograph by, 168
Matthyssens, M. H., 168
Mechanics, 151
Medals, 67
Mercantile career, training needed for a, 196
success, 195
training, Sir P. Magnus on, 194
Dr. Percival on, 194, 195
Merchant, necessity of training the, 39, 40
position of the, after the French Revolution, 183
qualities of a, 72, 73
real specific activity of the, 40
social position of the, 38
Michau, M., 78
Mignon, M., 58
Milan, Superior Technical Institute at, 187
Monnier des Taillades, M., 55
Morals, 152–154
Mühlhausen, school at, 136
Murman, P., 3
Music, 154

Naples, school of application for engineers at, 187
Natural and physical sciences, 151

Oderman, K. G., 158
Ohligs, B.W., proposition by, to establish a general mercantile institute in Vienna, 3
Ostendorp, M., 168
Oxford, examination for commercial certificates at, 200, 201

Paris Chamber of Commerce, course of accounting, subsidies to the, 127
commercial institute of, 125
subsidies to, 127
scholarships of, 126
commercial school of, subsidies to the, 127
free school of political science in, xx.
Oriental Athenæum, discussion regarding higher commercial studies in the, 76, 77
School of Higher Commercial Studies, 75–124
administration of the, 88
association of the former graduates of the, 91
board and tuition at the, 81
budget of the, 88, 89
classification of pupils at the, 86
curriculum of the, 84
development of the, 79
diplomas and certificates of the, 87
discipline at the, 87
distribution of the hours at the, 84
examinations at the, 85, 86
history of the foundation and development of the, 75–79
instruction at the, 82
marks at the, 86
normal course at the, 83, 84
official program of the courses of the, 91–124
organization of the, 81
preparatory schools of the, 83
program of studies at the, 82, 83
punishment at the, 87
purpose of the, 78
receipts and expenses at the, 88, 89
rewards at the, 87
scholarships of the, 80, 81, 126
situation of the, 78, 79
table of examinations held, and marks to be obtained in the, 100

Paris Chamber of Commerce, vacations at the, 81
special school of commerce at, 53
Superior School of Commerce, 53–75
administration of the, 69
alumni association of the, 73–75
attendance at the, 59
board and tuition at the, 61
budget for 1886 of the, 69
commercial and industrial excursions by the pupils of the, 65
conditions of admission to the competitive examination of the, 60
day pupils at the, 61
diplomas, certificates, and medals of the, 67
distribution of studies at the, 64
division or offices of the, 61–63
essays by pupils of the, 65
examinations at the, 60, 61, 66, 67
financial condition of the, 69
general discipline at the, 67–69
general considerations of the, 70–73
history of the foundation and development of the, 53–59
instruction at the, 61–65
penalties at the, 69
personnel of the, 70
program of the course of study in the third year at the, 62, 63
regulations of the, 61
sale of the, to the Paris Chamber of Commerce, 58
scholarships of the, 60
subsidy to the, 60, 127
summary of the characteristics of the, 73
table to determine the classification of a pupil at the, 66, 67
traveling scholarship of the, 65
Passy, F., 66
Pathier, M., 75
Patzelt Commercial School, 2
Pelleport, M. L., 55
Penalties, 69, 87, 191
Penmanship, 145
Pensions and salaries, 51
Percival, Dr., on mercantile training, 194, 195
Périer, C., 55
Pesth, commercial academy in, 2
Physical and natural sciences, 151
Piault, M., 58
Pleschner, C., 35, 36
Political economy, 151, 152
Pollard, A. T., remarks on commercial education by, 207, 208
Poux-Franklin, M., 55
Prague, address of thanks by the commercial council of, to K. Arenz, 42, 43
address to the merchants of Bohemia for the establishment of a commercial school in, 35
Bohemian academy in, 2
Commercial Academy, 2, 34–52
attendance at the, 42, 50
budget of the, 49
classes of pupils at the, 43
constitution of the instructing body of the, 43
course of railroading, postal and telegraph service at the, 44, 45
distribution of hours and subjects at the, 48
evening lectures at the, 42
examination in the, 43, 44
exercises in speaking at the, 42, 43
faculty of the, 50, 51
financial control of the, 44
foundation of the, 34–41
history of the, from 1856–1872, 42–45
influence of the, 41
means of instruction at the, 47
method of instruction in the, 43
one-year course at the, 49
organization of the instruction at the, 46, 47
privileges connected with the certificate of graduation from the, 47
proposed curriculum of the, 36
purpose and present organization of the, 45, 46
salaries and pensions paid by the, 51
statistics of the, 48, 49, 50
tuition in the, 44
polytechnic school in, 1
Sunday-school for commercial branches in, 35, 36
Products, raw and manufactured, 147
Professors, 134
Pupils, 61, 81, 131–133, 159, 169, 188
Railroads, study of, 146, 147
Real school, inadequacy of the, to supply commercial education, 34
Reims, commercial school at, 125
Rhawn, William H., ii
preface by, iii